PRINTING PRODUCTION

Mailroom Output: 320,000 Magazines per Day (SEE PAGE 5)

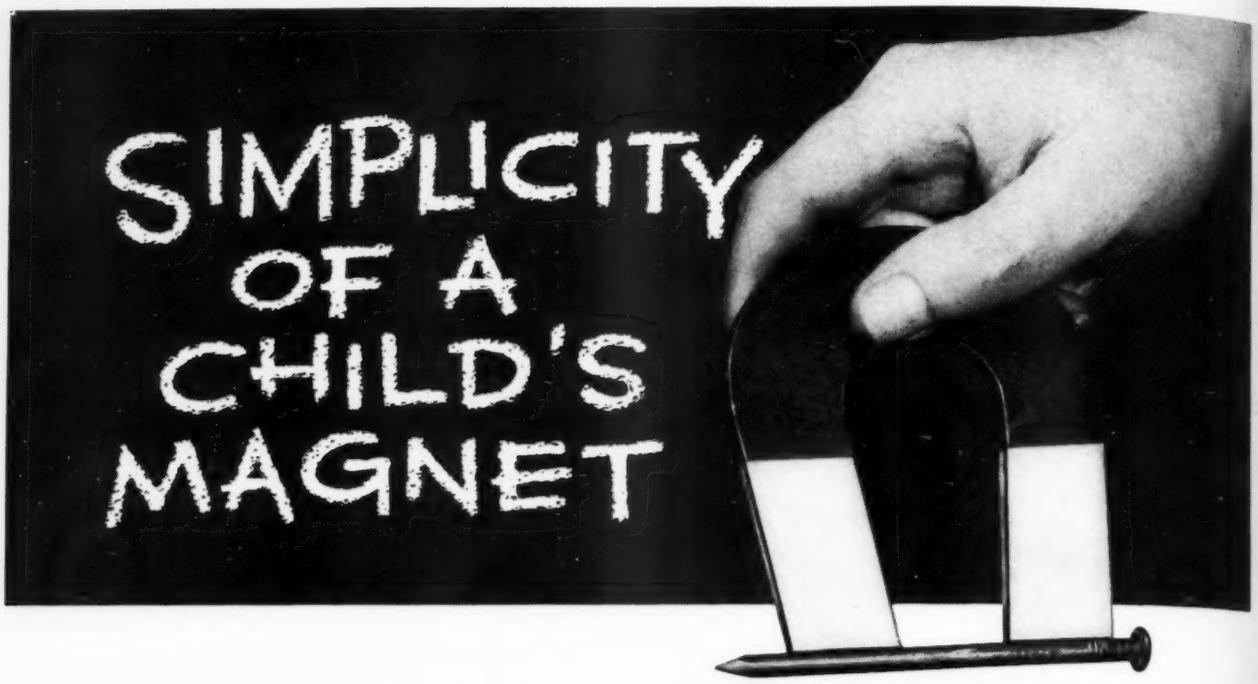
Progress Reported on Du Pont Plastic Plate

Changes in Web Offset Printed Daily Newspaper

Reports of Industry Conventions and Forums

Pass On: _____

SERVING PRINTING INDUSTRY
PRODUCTION EXECUTIVES EXCLUSIVELY



THE STAR SELECTRO-MATIC QUADDER

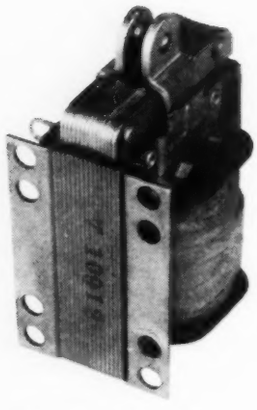


Illustration of the Selectro-Matic solenoid.

Magnets are fun. Most youngsters are familiar with the pleasure of owning a magnet with its apparently magical powers.

The STAR Selectro-Matic Quadder uses a modification of the youngster's magnet—called a solenoid—to perform several vital tasks. Solenoids, operating on safe 24 volt current, automatically move levers in and out for left, right, centered or justified composition. A solenoid is also used to prevent spaceband drive on quadded lines.

All these functions are performed automatically. The operator only depresses a button for right, left or center. After that the Selectro-Matic Quadder does the "thinking", leaving the operator's mind free to concentrate on his job of setting type.

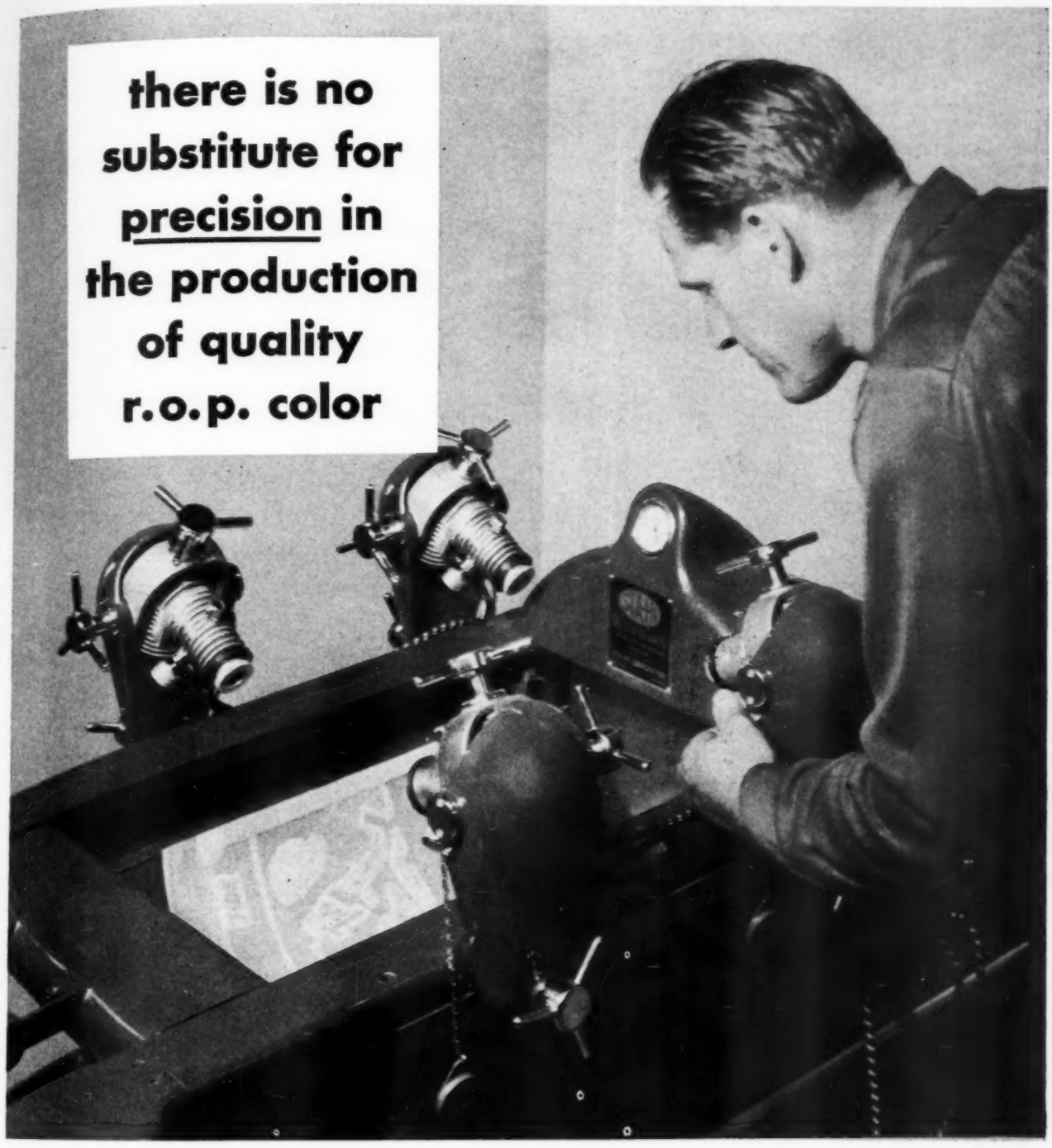
There are many other "simplicity" features in the Star Selectro-Matic Quadder. You can learn all about them by writing for the 8-page color brochure. Also ask for the list of Star Quadder Users and see the Star Quadder in operation in your vicinity

Precision TRADE ★ MARK Parts

STAR PARTS, Inc.
SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO. AGENCIES: CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER • SO. ACTON, MASS. • CANADA: PRINTING MATERIAL LTD. AND AGENTS OVERSEAS

For More Information Circle 167 on Reader Service Card



The Sta-Hi Master Trimmer pictured here is only one in a complete line of Sta-Hi precision machines designed specifically to assure scientific accuracy in the registration of ROP Color material - from original engravings through stereotype mats, from which can be cast plates that are in close register when they go on the press!...Ask for information on Sta-Hi COLORMATICS and Sta-Hi COLOR-AIDS...

STA-HI CORPORATION

235 W. WASHINGTON BOULEVARD, WHITTIER, CALIFORNIA

For More Information Circle 165 on Reader Service Card

The plus of a Hoe press:

SOLVING PRESS PROBLEMS SINCE NAPOLEON

The news of Napoleon's exile to St. Helena was printed on Hoe presses. This week, whatever news breaks, the stories will be printed on the amazing Hoe presses of today. Pressmen will print more papers, faster, better, because Hoe's complete pressroom know-how – with its beginning back in the Napoleonic era – is based on more than a century and a half of outstanding leadership in press design and manufacturing.

Hoe experts literally know pressrooms inside out. They've been working for generations improving, simplifying, eliminating kinks . . . developing printing presses that let you do amazing things with paper and ink . . . things that would have been declared impossible a few short years ago.

No two pressrooms are alike. *Your* problems are always special . . . which is why *it will pay you to get in touch with Hoe.*

R. HOE & CO., INC.
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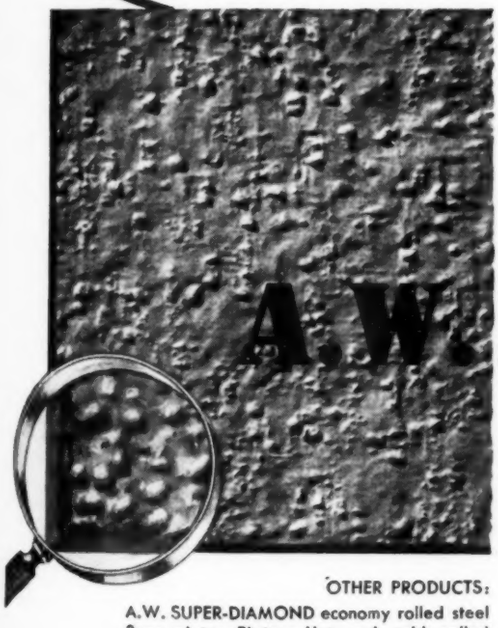
For More Information Circle 87 on Reader Service Card

Abdullah hasn't fallen off once, since he installed A.W. ALGRIP!

Now . . . he can even do aerobatics without ever using a safety belt. Abdullah knows that traction results from friction and that A.W. ALGRIP Rolled Steel Floor Plate provides the best traction possible wherever slipping might occur.

A.W. ALGRIP is made by a patented process in which grinding wheel type abrasive is rolled—*not coated*—to a controlled depth, as an integral part of tough steel floor plate. Wear merely exposes more abrasive . . . safety lasts for the life of the installation.

Check your plant for areas where slipping hazards may exist. A.W. ALGRIP provides supersafe footing under the most hazardous slipping conditions . . . even where water, oil or grease may collect . . . even on inclined surfaces. A.W. ALGRIP can be installed as independent flooring or flooring overlay. Send the coupon for A.W. ALGRIP information, today.



ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—approved for safety by Underwriters' Laboratories

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Please send A.W. ALGRIP Booklet AL-E30

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OTHER PRODUCTS:
A.W. SUPER-DIAMOND economy rolled steel floor plate—Plates—Hot and cold rolled sheet and strip—(Alloy and Special Grades)

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Another Step Ahead by... WOOD

Now, the NEW Push Button Ink Control System

The new WOOD Push Button Ink Control, mounted on operating side of unit at *EYE LEVEL*, is designed to produce micrometer increment adjustment of a controlled flow of ink. If desired, the panel may be placed at any other location within reasonable distance from the press.

Plastic push buttons, molded for finger operation, are Red and Green. To increase or decrease ink flow, operator simply depresses a "plus" (+) green button or a "minus" (–) red button. Ink flow will automatically adjust to precise amount desired.

The WOOD Push Button Ink Control may be installed on any WOOD press, either new or an existing model. Send for full information on this revolutionary method of improving and speeding-up newspaper production.

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MANUFACTURERS OF PRESSES, COLOR UNITS, REELROOM AND STEREOTYPE EQUIPMENT FOR A CENTURY

For More Information Circle 190 on Reader Service Card

NOVEMBER 1958
VOL. 89, NO. 2

PRINTING PRODUCTION

formerly PRINTING EQUIPMENT *Engineer*

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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Member Publications BPA Business Audit

Accepted as Controlled Circulation Publication at Cleveland, Ohio.

OUR COVER: Few operations in the printing industry equal the urgency of a magazine's or newspaper's mailing department for getting the finished product into the hands of the user. Part of this busy cycle of operations is depicted in the cover illustration; additional views may be found on page 48. They were all photographed in the mailroom of Meredith Publishing Co., Des Moines, Ia., which processes an average of 320,000 magazines per day. David Getman is our cover subject who is shown operating a mailing machine, which is capable of processing 10,000 magazine copies per hour. Labels are automatically affixed to the front of magazine from a pre-printed reel of subscriber addresses. Engineering advances in this department have aided in maintaining tight production schedules.

NEWS ITEMS

Three New Vice Presidents for Mergenthaler Linotype Co. have been announced by J. A. Keller, president. They are Paul S. Chisholm, vice president domestic sales; Louis Rossetto, vice president research and engineering and Wm. H. Granville, vice president in charge of manufacturing.

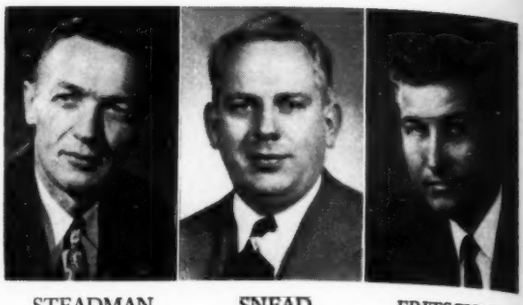
CHISHOLM

Chisholm, formerly Linotype's general sales manager, has been with the Company since 1945. Married and father of three children, Chisholm lives in Garden City, N. Y.

Rossetto has been with Linotype since 1948. He directed creation of Linofilm photocomposition system, and is closely identified with development of Mergenthaler's improved Linotypes. During the war Rossetto served in Army Ordnance, rising to the rank of lieutenant colonel and receiving the Legion of Merit for his work in fire control design and development. With his wife and three children, he lives in Kings Point, N. Y.

Granville has been Linotype's works manager since 1957. He was born in Fairfield, Conn., and has a bachelor's degree in engineering and a master's in administrative engineering from New York University. A member of the American Management Assoc., Granville lives in Convent, N. J. with his wife and four children.

Three Vice Presidents — Kingsport Press Inc., Kingsport, Tenn., has promoted three men to vice presidencies. C. R. Steadman has been named vice president, Western Sales Div.; S. R. Snead has been designated vice president-traffic manager; and C. E. Fritschle has been appointed vice president-director of industrial relations.



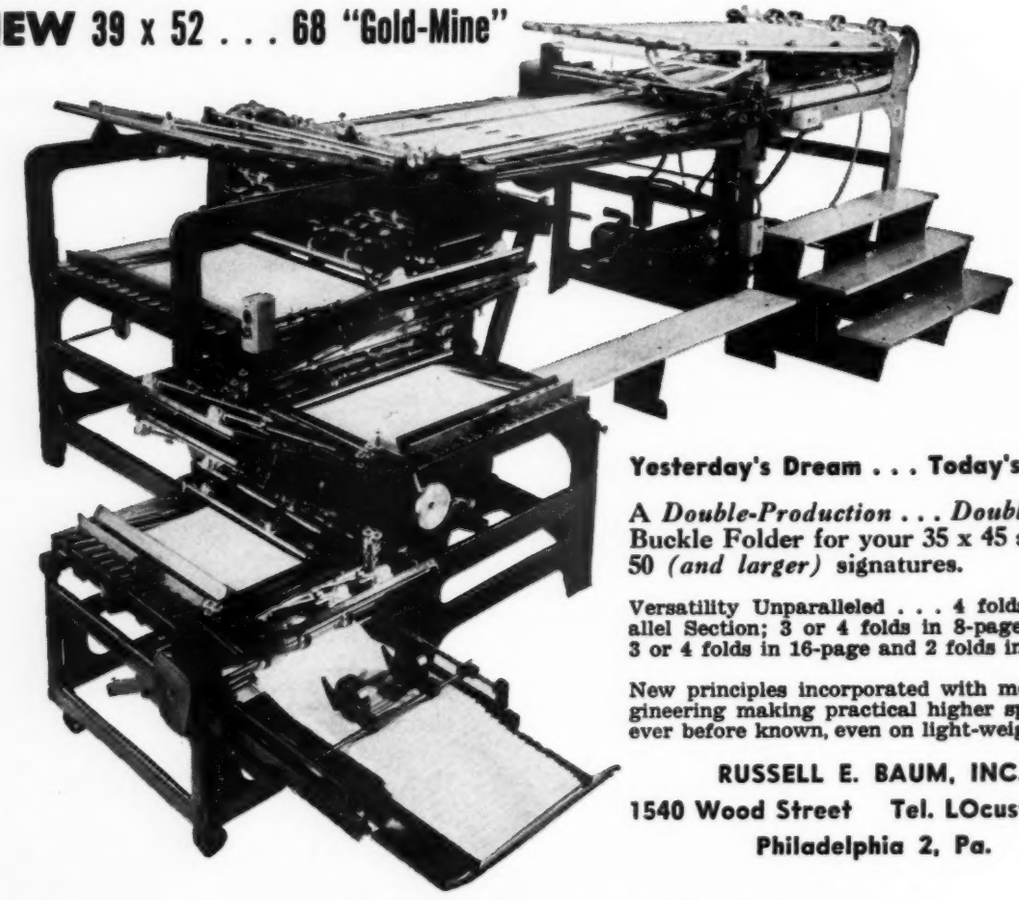
STEADMAN SNEAD FRITSCHLE

Miller Names Canadian Distributor—Miller Printing Machinery Co. has reported the appointment of Sears, Limited as sole Canadian distributors of Miller printing presses. Sears maintains offices in Montreal, Toronto, Hamilton, London, Winnipeg, Calgary, Edmonton, and Vancouver.

Foreign Companies to Produce Triplemetal —Edes Manufacturing Co. has announced the negotiation of separate technical agreements for the overseas production of Triplemetal 100, the company's fine grain zinc alloy for photoengraving. Companies involved include: Century Storage Battery Co., Sydney, Australia; Mitsuit Mining and Smelting, Tokyo, Japan; Producto de Zinc, Mexico City; and Stolheiger Zinc A. G., Aachen, West Germany.

Named Miehle Sales Director — Carlton Mellick, vice president-sales, the Miehle Company, Div. of Miehle-Goss-Dexter, Inc., has been appointed director of sales of several other divisions and affiliates, including the Dexter Company, the Lawson Company, the Chicago Machinery Laboratory and Mercury Engineering Corp. As director of sales, Mellick will be responsible for coordinating and directing sales and service activities for the several divisions of M-G-D, Inc., supplying equipment for the commercial, book, carton, label and publication fields of the Graphic Arts.

NEW 39 x 52 . . . 68 "Gold-Mine"



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A *Double-Production . . . Double-Profit* Buckle Folder for your 35 x 45 and 38 x 50 *(and larger)* signatures.

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New principles incorporated with modern engineering making practical higher speed than ever before known, even on light-weight stock.

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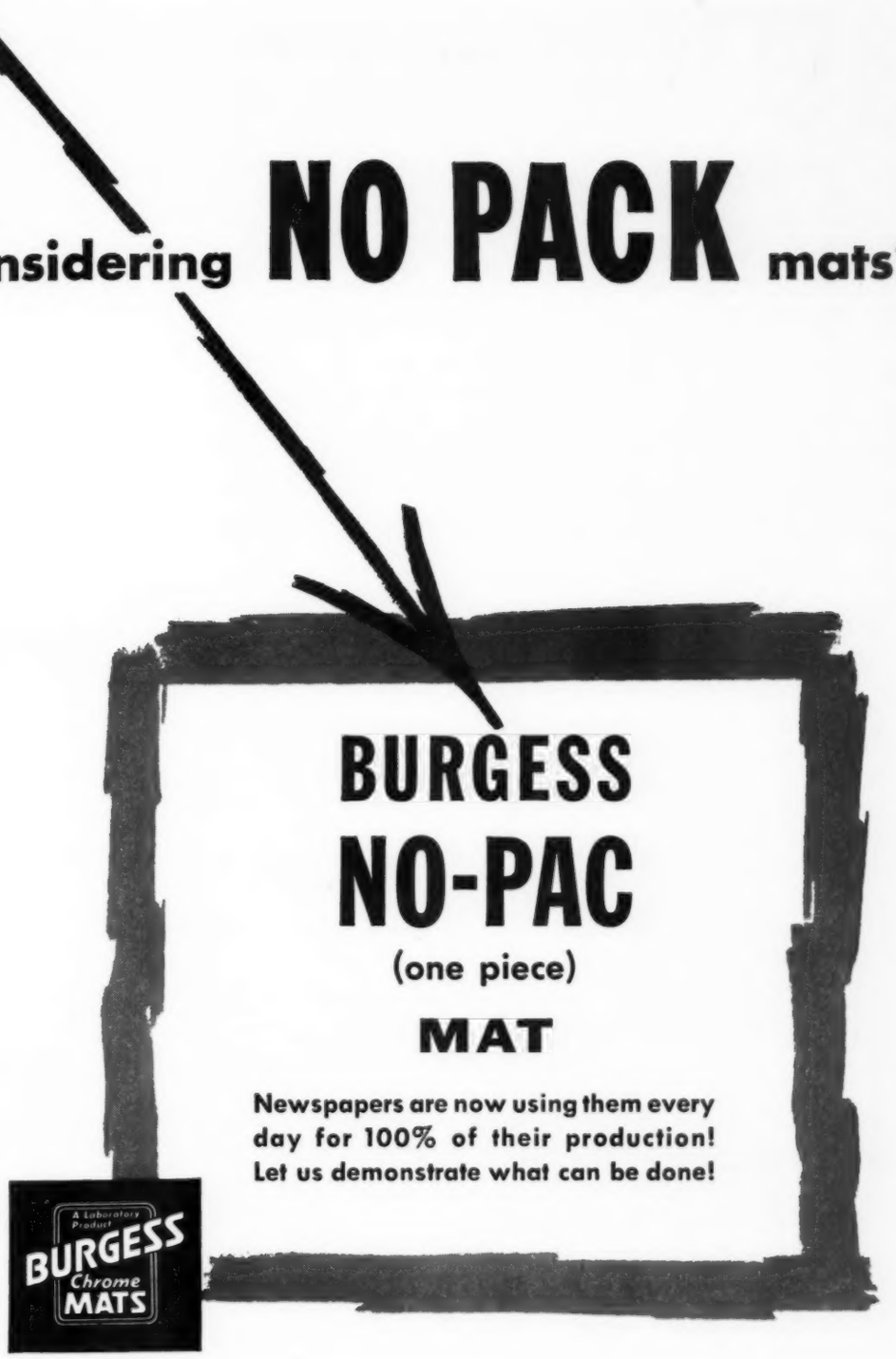

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Supreme Tone-Tex Mats, Freeport, Illinois

Canadian Representative, R. M. Louson & Co., Ltd., Kennedy Road, Agincourt, Ontario

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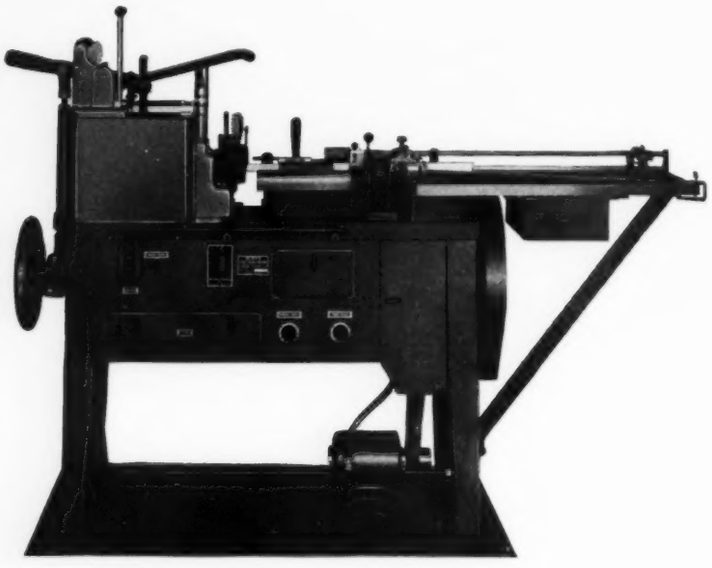
FRIEDMAN WOLFANGER CARTER MINTER KLEINHANS

Todd Company Expands—The addition of two new Bank Service plants, the creation of four new production functions and five appointments were recently announced by Todd Company Div., Burroughs Corp., according to A. Richard Todd, director of manufacturing. John N. Friedman was named general printing production manager, with responsibility for all printing plants. Howard F. Wolfanger was appointed production manager, Bank Service plants. Robert E. Carter was named Eastern production manager, with responsibility for eight plants, and Gordon G. Minter was named Western production manager, with responsibility for four plants. Louis E. Kleinhans was appointed superintendent of the Hadley plant, Los Angeles.

The November Meeting for the Society of Printers, Boston, was held on Nov. 5 at the Harvard Club. Guest speaker was Robert R. Bruun, American news editor, *Christian Science Monitor*. He spoke on newspaper format and makeup.

Daugherty Passes—R. S. Daugherty, president, Shelby Salesbook Co., Shelby, O., died Sept. 14 in New York, N. Y. He was a former president of the Business Forms Institute and was serving as a director of that organization.



model K Elrod

The Ludlow Company introduces the newest member of the Elrod family—the model K for the production of leads, slugs, rule, and base material from 1 to 18 points in thickness.

Ludlow's established reputation for simplicity, dependability, and production results has been built into this new model K. The addition of the model K now makes available a choice of six different Elrod models to fit your particular needs. The model K has been field-tested and is ready to go to work for you.

Elrod users can profitably add the model K as supplementary equipment, thus permitting continuous operation on 2 point leads, 6 point slugs, or other largely used material. The model K uses standard Elrod molds up to 18 points, and these molds are interchangeable in all six Elrod models, gas or electric heated.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

For More Information Circle 107 on Reader Service Card

New Supplier Corporation—Charles A. Grumbling, jr. announces the opening of Lithographic Supply Co., Inc., at 325 Arch St., Philadelphia. The corporation will distribute equipment and supplies for the printing industry. Lithure and Lithengrave plates and chemicals and other products manufactured by Printing Developments Inc. will be carried.

Twin Cities Manager—Edward C. Strong has been named branch manager for Harris-Seybold Company in the Minneapolis and St. Paul, Minn. area. The branch covers all of Minnesota, North and South Dakota, Iowa and most of northwestern Wisconsin.

STRONG

DRAKE

Heads New Post for Champion—Ronald I. Drake has been appointed to the newly created position of technical director of customer services for Champion Paper & Fibre Co. He will serve as technical assistant and advisor to John W. Zimmerman, vice president of customer services, on the use of Champion's products by printers, converters, and others. The firm also announced it will organize a force of customer service representatives.

M-G-D Product Planning Director—Paul A. Florian has been promoted to director of product planning for Miehle-Goss-Dexter, Inc. He was recently executive assistant to the president of the Goss Company, a division of M-G-D. In his new position, Florian will direct both corporate and divisional product planning programs.

FLORIAN

SCHIRMER

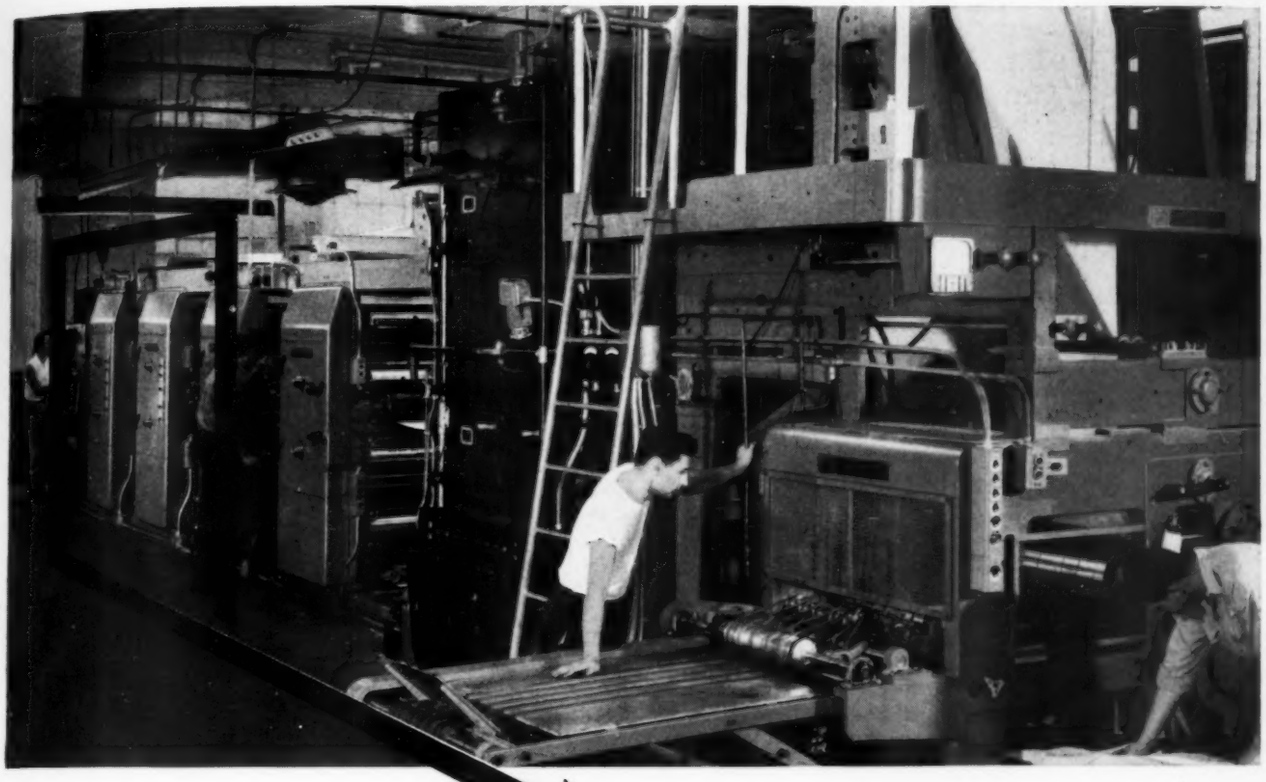
Huber Sales Promotion Manager—Ed Schirmer was recently appointed sales promotion manager of the Ink Division, J. M. Huber Corp., according to J. S. Hart, vice president. Schirmer will make his offices at the Ink Division headquarters in Hillside, N. J.

Management Changes for Typo Firm—Oscar Leventhal, Inc., New York, N. Y., typographers, recently announced a change in corporate management. Stanley Leven-

(Continued on Page 12)

PHILADELPHIA PRINTER DISCOVERS

Web Offset Press Pays From Start . . . two new color units added*



DEC. 1957

Majestic Press (Philadelphia) puts Harris-Cottrell 2-unit perfector web offset press into service.

*JULY 1958

Majestic adds two more color units permitting production of two colors, two sides of two webs; or four colors, two sides of one web.

The photograph above shows the two new color units —added to the original Harris-Cottrell 22¾ x 38″ perfector web offset press at Majestic.

This prominent commercial printer wasn't long learning that web offset offers all the advantages of lithography—plus exceptional savings. Now with equipment to print two sides, two colors of two webs; or two sides in four colors of one web, Majestic will have lowered production costs still further. In-line operation will deliver folded work requiring a minimum of finishing. Work on anything from news to 80-pound coated comes out at up to 20,000 units per hour—of good quality—at low cost.

Harris-Cottrell web offset equipment is fine for newspaper, magazine, catalog and other general-purpose work. It can be supplied with delivery into folder, rewinder, and/or sheeter and pile delivery. For more information, write The Cottrell Company, Department PP, Westerly, Rhode Island, or call LYric 5-5731.

HARRIS INTERTYPE CORPORATION

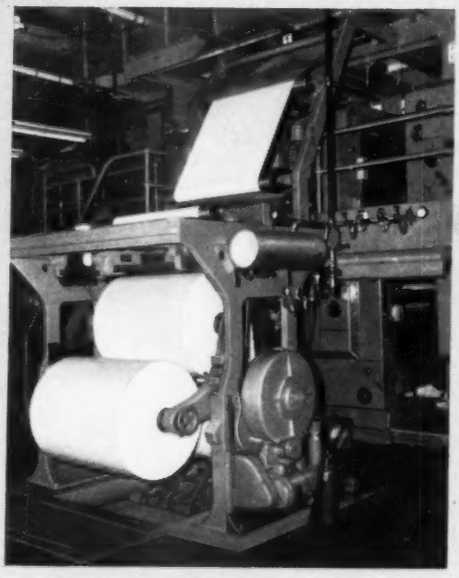
THE COTTRELL COMPANY

A Subsidiary of Harris-Intertype Corporation

Westerly, Rhode Island

For More Information Circle 45 on Reader Service Card

The main control console—Finger-tip control of every press function insures peak production efficiency from this Harris-Cottrell LGC press. Notice the double Cottrell sheet delivery mechanism. Press can also be equipped with a high-speed Cottrell magazine folder.



The automatic roll feed mechanism supplies a continuous 50" web of paper at 1,000 feet per minute. A paper tensioning device measures the feed rate and the Cutler-Hammer Drive Control adjusts the roll speed. Unit is also equipped with an automatic paster.

Pressmen are installing a p registered color plate on one the eight color cylinders. Pla can be inserted and remov without disturbing the w lead. Notice the conveni Cutler-Hammer Control Sta

...and at Western Printing & Litho Company, Poughkeepsie, N. Y.

The complete electrical system for the new high-speed, eight-color Harris-Cottrell LGC web offset printing press is Cutler-Hammer engineered

This ultra-modern high-speed press installation has set new production records for high quality, low cost front-and-back four color offset printing. This press is the result of an intensive research and development project conducted by engineers from the Harris-Seybold, Cottrell and Western Printing & Litho Companies. And we of Cutler-Hammer point with particular pride to this installation because the entire electrical system was engineered by Cutler-Hammer.

Cutler-Hammer supplied the unit power sub-station located at the extreme left of the second deck. Cutler-Hammer provided the two 100 hp main drive motors. Cutler-Hammer furnished the D-c Adjustable Voltage Drive and Control. Cutler-Hammer supplied the automatic reel drive and control, and the control for all A-c motor driven auxiliaries.

Able engineers respect able engineering, and for this reason Cutler-Hammer continues to be the choice of the leaders in the Graphic Arts and Publishing Industries. Whatever your electrical requirements may be, put this engineering experience to work for you by specifying Cutler-Hammer. Write today . . . your inquiry will receive prompt attention. Dept. U277. Cutler-Hammer Inc., Milwaukee 1, Wisconsin.

CUTLER·HAMMER CONTROL C·H

CUTLER·HAMMER

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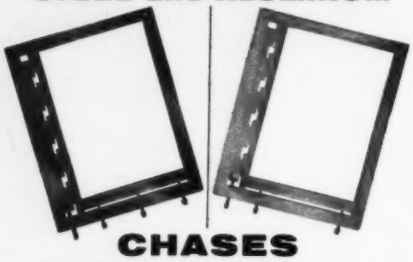
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation, Inc.

For More Information Circle 47 on Reader Service Card

AMSCO
STEEL and ALUMINUM



CHASES

THE BEST AND MOST ECONOMICAL MONEY CAN BUY!

Amsco's electrically welded steel chases, with the smoothly ground joints are world renowned.
Amsco Aluminum Chases are specifically made for operations wherein lightness is a desired factor. Steel insert supports reduce wear to a minimum at the contact points of the foot stick and side wedge screws.
Squared and true Amsco Chases are patterned from a template or a blue print.
Amsco supplies a "complete chase line", for newspapers, commercial printers, stereotypers and electrotypers. Standards or specials are available.
CATALOG AVAILABLE FROM DEALERS OR WRITE DIRECT

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GLAZCOTE INK CONDITIONER
Provides tough, scuff- & scratch-resistant finish.
1 lb. can $2.20 Send for Price List
CENTRAL COMPOUNDING COMPANY
1723 North Damen Avenue • Chicago 47, Illinois
Mfrs. of Trik, 20/20 Overprint Varnish, 33 & 0-33 Ink Conditioners

Circle 34 on Reader Service Card

REVISED EDITION

Graphic Arts Procedures

By R. RANDOLPH KARCH

The fourth printing of a useful book on the fundamentals of printing. Written for the printer, printing student, apprentice, artist, copywriter, advertising and business executive. Includes: 384 pages; 257 illustrations; chapters on printing processes, type faces, layouts, proofreading, printing plates, imposition, presswork, bindery work and platemaking; 17 pages of definitions of Graphic Arts terms.

$4.65 per copy postpaid Cash with order

(Outside U.S.A. $5.65)

★★★★

PRINTING PRODUCTION

1276 W. 3rd St. Cleveland 13, O.

News Items

(Continued from Page 8)

thal, former secretary-treasurer, has been named president, filling the post left vacant by the death of his father, Oscar Leventhal, founder of the firm. George R. Thole is the new secretary-treasurer and John Warner continues as vice president.

Employee Ownership Plan—Graphic Arts Corp. of Ohio has instituted a stock purchase plan whereby employees will obtain ownership of the firm over a 10 year period. Ernest E. Jones, president of the

JONES

SEARS

company since 1927, has been named chairman of the board; Bernard Sears, with the company since 1924, has been named president.

Vulcan Rubber Promotes Two—J. H. Wyatt, division manager, Vulcan Rubber Products, Div. Reeves Brothers, Inc., recently announced the appointment of George West as technical manager of development for the firm's Buena Vista, Va. plant. Ralph C. Beard, formerly industrial engineer at the Buena Vista plant, succeeds West as coordinator of the New York, N. Y. plant.

Excelsior Printing Appoints—Donald G. Hosley has been appointed general manager of Excelsior Printing Co., North Adams, Mass. A graduate of Carnegie Institute of Technology, he formerly was with Connecticut Printers Inc., Hartford, Conn.

HOSLEY

SALTER

Du Pont Assistant Manager—Victor M. Salter has been named assistant manager, Graphic Arts products, E. I. du Pont de Nemours & Co. Inc. Salter has had positions in both research and sales of Du Pont's photo products department since joining the firm in 1947

Barker Joins Beard—Earl H. Barker has joined the Dural Chase Div., Beard Newsprint & Warehouse Co. Formerly with the Rochester (N. Y.) *Times-Union*, Barker will cover the East and Midwest areas for Beard.

BARKER

Wisconsin Association Elects—New officers of the Graphic Arts Assoc. of Wisconsin are as follows: Earl Vogt, Breithaupt Printing Co., president; Dick Leberman, Fakler Printing Co., vice president; Dave Wells, Wells-Badger Corp., secretary, and Pete Olsen Printing Co., treasurer. Richard Snyder, Cramer-Krasselt Co., was elected to the GAA board of directors for a three year term.

4th District Craftsman of the Year—John L. Osias, General Printing Ink Co., has been chosen Craftsman of the Year in the 4th District by the International Assoc. of Printing House Craftsmen. Osias has been active in the Graphic Arts field for 47 years and a member of the Richmond (Va.) Craftsmen's Club for 24 years.

OSIAS

COUGHLIN

ATF Eastern Manager—George E. Coughlin has been appointed Eastern regional manager, Type Division, American Type Founders Co. Inc. He will supervise promotional efforts of ATF's 18 type dealers in Eastern and several Midwestern states.

Mr. Linotype is Retiring—After 44 years with Mergenthaler Linotype Co., J. W. (Jack) Reid "retired" on Oct. 1. The word is in quotes because he will continue as a member of Linotype's board of directors as well as a consultant to its sales division and he has already scheduled a strenuous field trip to begin his so-called leisure era. Announcement was made by J. A. Keller, Mergenthaler president.

Reid's associates swear he can criss-cross the United States in any direction and never be farther than a few miles from an old and close friend. He has traveled several hundred thousand miles—most of them by air.

He became vice president in charge of sales in 1952, and was also elected president of Canadian Linotype, Ltd. He became a member of the Mergenthaler board of directors in 1958 and continues in that capacity.

(*Continued on Page* 16)

Investigate the GOSS 3-Point Plan...

FOR SPEED AND ECONOMY IN NEWSPAPER MATERIALS HANDLING

Prepare for the future! Find out how to make your operation more automatic...more efficient...more profitable with the Goss 3-point plan for materials handling in newspaper plants. Publishers and mechanical executives with an eye to the future are studying this plan to save time and money in moving paper rolls to the reelroom, stereotypes to the pressroom and printed papers through the mailroom.

Here are the three parts of the program:

1. Planned Flow—our engineers, backed by the long experience of Goss in newspaper equipment design and plant layout, will study your operation and recommend a system to meet your specific requirements.

2. Mechanized Movement— well designed, well constructed handling equipment, such as track systems, conveyors, bundlers and automatic dispatching systems will be selected and installed by skilled personnel.

3. Programmed Control—in many applications, particularly in the mailroom, control systems can be developed to fully automate materials movement.

Investigate the Goss 3-point plan...let our experienced engineers recommend a system to improve your materials handling.

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MGD

CUT COSTS . . . but not rollers! With the Dayco Combination of Fountain Dividers and Color Separators, you can run color splits as narrow as 1½" without cutting a roller. Equip your Miller Major — or any one-color press — with this Dayco Combination for the finest in split color work . . . at the lowest cost.

"DAYCO ROLLERS Maintain Perfect Tack Despite Punishment of High Speed Runs..."

"Used exclusively on our Miller Major Automatic Presses," says Mr. Harold S. Lyle, Plant Superintendent, Allen, Lane & Scott, Philadelphia, Pennsylvania.

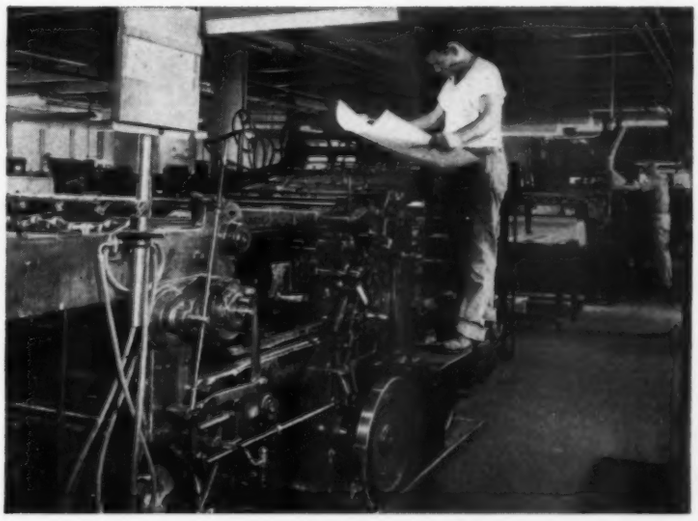
"We're specialists in legal and financial printing and have to turn out the finest quality work on time . . . all the time," says Mr. Harold S. Lyle, Plant Superintendent of Allen, Lane & Scott, one of Philadelphia's quality printers.

"For that reason you'll find Dayco Rollers are used exclusively on all four of our Miller Major 27" x 41" Automatic Presses. Running at 3500 impressions an hour, the Dayco Rollers are in constant contact with the metal forms. Yet, despite the frictional heat developed during high speed runs, the Dayco Rollers last 2 to 3 years without chipping, cracking or peeling.

"No matter how much punishment our Dayco Rollers have taken, they still maintain their same velvety tack, they still show no evidence of glazing, and they still wash up clean in no time at all. We feel that Dayco Rollers are just what we need to turn out top quality work in the fastest possible time."

Don't forget you can have your Dayco Rollers re-Daycoed for another lifetime of perfect inking at far less than the cost of a new roller. For details, just ask your Dayco representative when he calls or write The Dayton Rubber Co., Dayco Division, Dayton 1, Ohio.

"Dayco Rollers are used exclusively on all four of our Miller Major 27" x 41" Presses."



Fast cleaning Dayco Rollers stay open and receptive to ink . . . always print a quality job.

THE DAYTON RUBBER COMPANY, Dayton 1, Ohio
West Coast Distributors: Tillicum Rubber Company, Lacey, Washington; Far West Ink Co., Seattle, Washington; Walter Lawrence Co., Los Angeles; George Shively Co., San Francisco; Albert Lodymon, Dallas, Texas

DAYCO ROLLERS . . . for Offset, Letterpress, Newspaper, Corrugated Boxboard, Gravure, Flexography, Coating, Graining, Steel Mills.
Dayco Offset Blankets, Dayco Fountain Dividers, Dayco Color Separators.

Dayton Rubber

For More Information Circle 48 on Reader Service Card

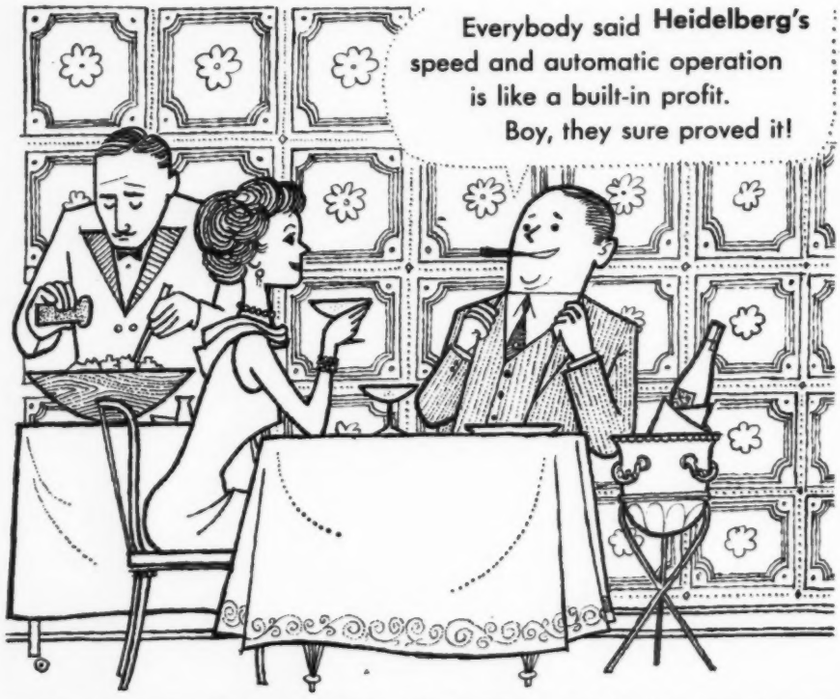
News Items

(Continued from Page 12)

George Schultz Honored — The senior members of the Miehle Company, Div. Miehle-Goss-Dexter, Inc., 14 men with a total of 236 years of service, recently honored George Schultz, treasurer. The occasion was Schultz's 40th anniversary with the firm.

Newsweek Printed in East — Newsweek magazine has contracted with Art Color Printing Co., Dunellen, N. J., for East Coast printing facilities. Operation will begin in spring of 1960.

Horn Ohio Vice President—Ralph Dunbar has been appointed a vice president of Horn Ohio Co., Cleveland. He was formerly assistant sales manager for Horn Ohio and recently acted as a consultant for the firm.



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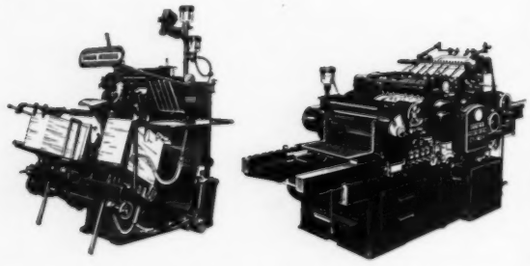

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"Over 90,000 Original Heidelbergs in use world wide"

distributors:
Heidelberg Eastern, Inc.
Glendale, L. I., N. Y.
Heidelberg Western Sales Co.
Los Angeles, Calif.
Heidelberg Southern Sales Co.
Houston, Texas

For More Information Circle 243 on Reader Service Card

MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assoc. — 1959 Conv., Hotel Statler-Hilton, Dallas, Tex., Oct. 19-21. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA Mechanical Conf.—1959 Conf., Hotel Morrison, Chicago, June 21-25. Mgr. Richard E. Lewis, ANPA Mechanical Dept., 750 Third Ave., New York 17, N. Y.

Book Manufacturers' Institute—Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Educational Graphic Arts Exposition—Coliseum, New York, N. Y., Sept. 6-12, 1959. Gen. Mgr. A. E. Giegengack, 5600 Massachusetts Ave., N.W., Washington 16, D. C.

Fifth District Craftsmen's Conf.—1959 Conf., Hotel Miami, Dayton, O., May 22-23. Secy.-Treas. George W. Thompson, Toledo Colortype Co., 1711 Jefferson Ave., Toledo, O.

Graphic Arts Trade Assoc. Executives—Managing Director, William H. Gary, Printing Industry of Twin Cities, Inc., 2645 University Ave., St. Paul 14, Minn.

Gravure Technical Assoc.—1959 Conv., Drake Hotel, Chicago, Mar. 6-8. Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Mechanical Conf.—1959 Conf., Hotel Statler, Detroit, Jan. 18-20. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf.—Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1959 Conf., Hotel Biltmore, New York, N. Y. Sept. 7-10. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1959 Conv., Hotel Statler, New York, N. Y., Sept. 5-9. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, O.

Intl. Graphic Arts Education Assoc. — 1959 Conf., University of Colorado, Boulder, Colo., Aug. 2-7. Exec. Secy. Samuel M. Burt, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Intl. Printers Supply Salesmen's Guild—1959 Conv., Hotel Statler, New York, N. Y., Aug. 28-Sept. 1. Secy. Charles S. Tompkins, Tompkins Printing Equipment Co., 1040 W. Grand Blvd., Detroit 8.

Intl. Typographic Composition Assoc.—1959 Conv., Hotel Park Sheraton, New York, N. Y. Sept. 9-12. Exec. Secy. W. E. Switzer, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conf.

(Continued on Page 20)

For More Information Circle 120 on Reader Service Card

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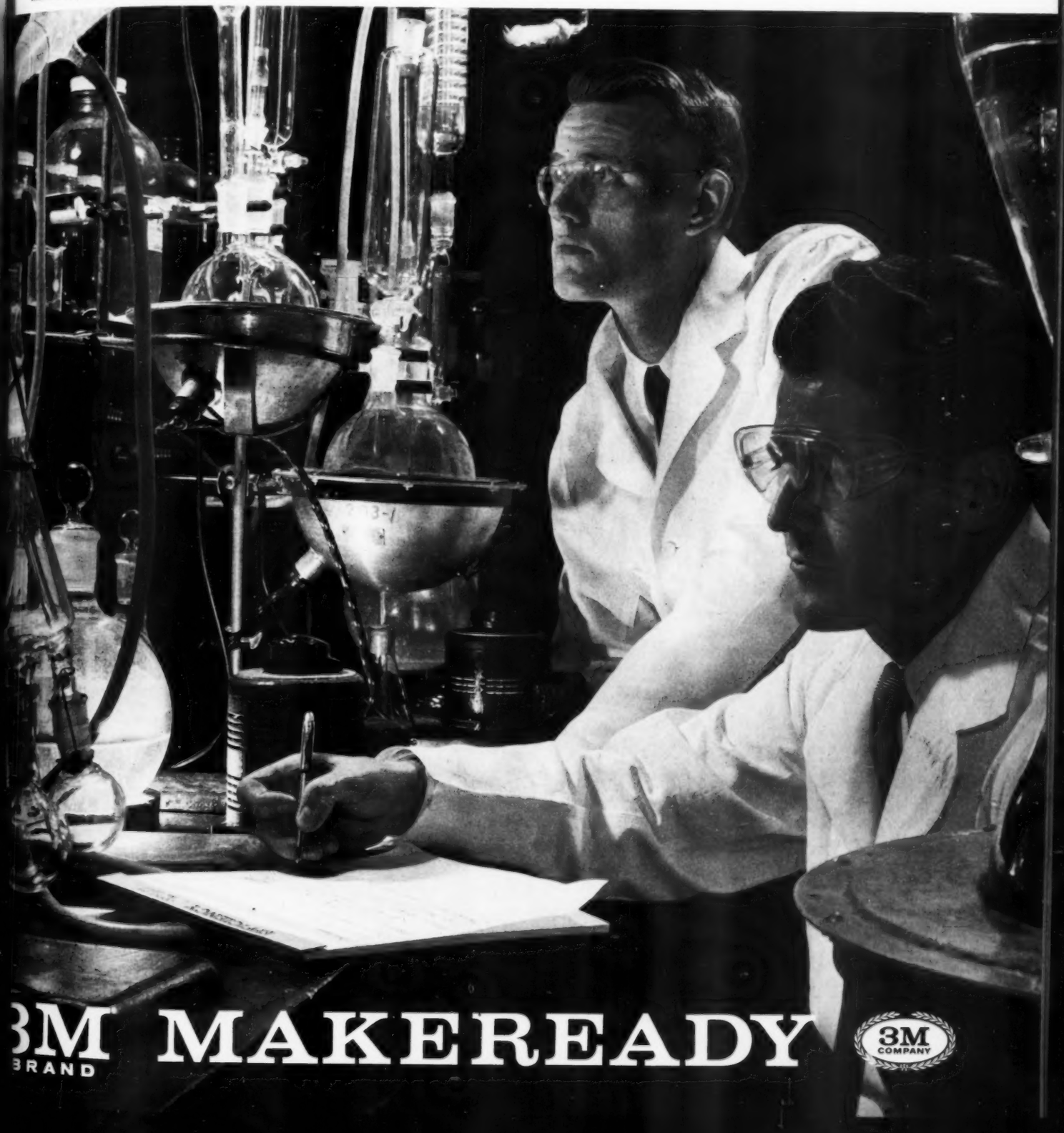

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Diagram of costly, 4-hour handcut overlay

Does this make economic sense?—Using the tedious, costly, 100-year-old handcut method, a top pressman might take 4 hours of valuable time to make ready this 4-up sheet. He'd have to correct each plate separately. And, maybe you'd get top quality! But, with 3M MAKEREADY you can get precision, completely-standardized pressure correction across the entire form in 40 minutes or less! Users report quality is increased on every job. And, you know superior quality means repeat business. For comparative test proof in your shop, write: Printing Products Division, Minnesota Mining and Manufacturing Co., St. Paul 6, Minnesota.

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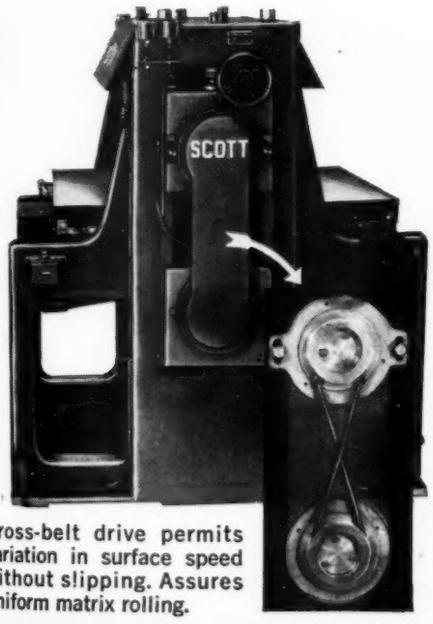
Provides Better Mats... Free From "Buckles"

Rolls any kind of Matrix, eliminates imperfections, produces sharp, full depth mats, free from mechanical buckling. Molding cylinder automatically adjusts itself to variations of each form, molding the mat in natural manner. Mat retains exact size of original form without any stretch or distortion.

PRICE....$7400

F.O.B. Plainfield, N. J. Complete with 208/220V Motor and Control. If shipped assembled, deduct $200.
Price subject to change without notice.



Cross-belt drive permits variation in surface speed without slipping. Assures uniform matrix rolling.

Features of the Scott "IDEAL" Matrix Roller

- Size of Bed...34"x44", 6" thick, steel buffer plates at each end.
- Height of Bed...36".
- Overall Sizes...80¾" long over bed, width 56½", height 59½".
- Weight...11,500 lbs.
- 3 HP Reversible Motor, equipped with automatic brake.
- Anti-Friction bearings throughout.
- Forms loaded, and unloaded, from either end or side.
- Finger tip push button starting.

Send for literature and specifications, etc.

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For More Information Circle 156 on Reader Service Card

Industry Meetings

(Continued from Page 16)

—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Kansas-Missouri Newspaper Mechanical Conf.—Kansas Gen. Mgr., Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy-Treas. William A. Bray, Missouri Press Assoc., 115 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—1959 Conv., Hotel Greenbrier, White Sulphur Springs, W. Va., Apr. 13-16. Exec. Dir. Oscar Whitehouse, 1025 Connecticut Ave., N.W., Washington 6, D. C.

Mid-Atlantic Newspaper Mechanical Conf.—1959 Conf., Shelburne Hotel, Atlantic City, N. J., Mar. 12-14. PNPA General Mgr. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assoc. of Litho Clubs—1959 Conv., Twin Cities (Minneapolis-St. Paul, Minn.), June 11-13. Exec. Secy. Fred A. Schulz, Buckbee Mears Co., Toni Building, St. Paul 1, Minn.

National Paper Trade Assoc.—1959 Meeting, Waldorf Astoria Hotel, New York, N. Y., Apr. 1-3. Secy. J. H. Londergan, 220 E. 42nd St., New York 17, N. Y.

National Assoc. of Photo-Lithographers—1959 Conv., Hotel Muehlebach, Kansas City, Mo., Nov. 18-21. Exec. Dir. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—1959 Meeting, Hotel Conrad Hilton, Chicago, Oct. 20-24. Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Composing Room Executives Assoc. — Secy. Lewis R. Greene, Westerly (R. I.) *Sun*.

New England Newspaper Mechanical Conf.—Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

Newspaper ROP Color Conf.—Secy. Arthur Brashears, American Assoc. of Newspaper Representatives, 141 E. 44th St., New York, N. Y.

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Albany (N. Y.) *Times-Union*.

Northwest Mechanical Conf.—Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1959 Conf., Hotel U. S. Grant, San Diego, Calif. Sept. 25-27. Secy. Fred Moyer, Sr., 6630 Mayflower Ave., Bell, Calif.

Packaging Institute Assoc. — Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave. N.W., Washington 15, D. C.

Research and Engineering Council—1959 Conf., Sheraton McAlpin Hotel, New York, N. Y., May 18-20. Managing Dir. Robert E. Rossell, 5728 Connecticut Ave. N.W., Washington 15, D.C.

Screen Process Printing Assoc., Intl.—1959 Conv., Hotel Statler, New York, N. Y., Oct. 31-Nov. 2. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1959 Conf., Hotel Dinkler-Plaza, Atlanta, Ga., Aug. 9-11. Secy. John E. Johnson, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1959 Conf. Hotel Texas, Fort Worth, Tex., Mar. 8-10. Secy. Claude V. Capers, P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc. — 1959 Conv., Hotel Robert Meyer, Jacksonville, Fla., Apr. 27-29. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1959 Conv., Hotel Manager, Rochester, N. Y., June 15-17. Secy.-Treas. B. L. Sites, 421 Sunnyside Ave., Elmhurst, Ill.

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With Exclusive Automatic Feed

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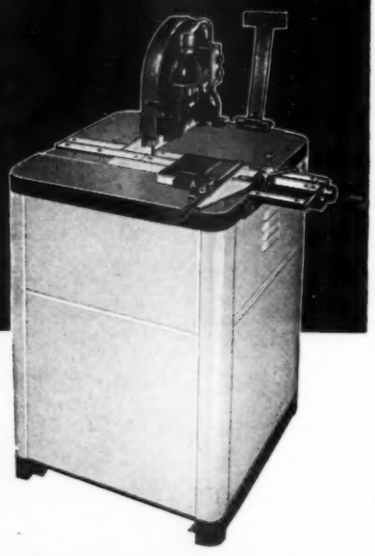

No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

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NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (*on Both Models*)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.

2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.

4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

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Powderdot is a special two-component, formaldehyde type developer which provides highest possible contrast, crisp dots, better line resolution and has an exceptionally long tray life.

Companion in the darkroom is Chemco's non-corrosive Power-Fix which clears negatives three times faster than conventional "hypo" baths and lasts days longer. Easy to mix. Now comes packed in economical 5-gallon, plastic cubitainers which are easy to use, safe, unbreakable and assure product purity.

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HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

FILMOTYPE MACHINE

The Filmotype photolettering machine, with lettering and type available in sizes 12 pt. to 144 pt. in over 1000 type styles, is described in a six page folder. The built-in color signal system guides the operator to correct letter spacing, reports Filmotype. Circle No. 331 on Reader Service Card.

TYPRO PHOTOLETTERING MACHINE

Features and type styles of the Typro power driven photolettering machine are described in a two page bulletin and 20 page type specimen booklet available from Halber Corporation. Power driven for selection of characters in sizes from 6 pt. to 144 pt., with proofs in either positives or negatives direct, and motorized developer unit are among features. Circle No. 332 on Reader Service Card.

MAT CORRECTION UNIT

Fisk Industries offers literature regarding its Align-A-Mat device for checking and realigning Linotype and Intertype mats. Circle No. 327 on Reader Service Card.

FOTO-RITER LETTERING MACHINE

The Foto-Riter photolettering machine, with overall dimensions of 6⅝ in. by 4½ in. is described in a four page folder by Foto-Riter Company. Each alphabet letter is an individual film slide which is inserted into machine and exposed over 35 mm. photo paper. Circle No. 335 on Reader Service Card.

HEADLINER PHOTOLETTERER

The Model 400 Headliner photolettering machine and type styles are described in a 16 page folder offered by Vari-Typer Corporation. Display type from 12 pt. to 72 pt. is delivered on 35 mm. paper or film in positives or reverses says the sponsor. Circle No. 336 on Reader Service Card.

AMSCO FORM CHASES

Amsco steel and aluminum chases for newspapers, commercial printers, stereotypers and electrotypers are described in a catalog made available by American Steel Chase Co. Circle No. 326 on Reader Service Card.

PHOTON PHOTOTYPESETTING SYSTEM

The Photon phototypesetting machine is described in an eight page booklet published by Photon, Incorporated. Operator commands 17,280 characters from a single keyboard with line lengths to 54 picas and sizes to 72 pts. at speeds up to 8 or 10 characters per sec., states Photon. Circle No. 333 on Reader Service Card.

PROTYPE PHOTOLETTERING MACHINE

The ProType photolettering machine is the subject of an eight page, two color folder made available by Mergenthaler Linotype Co. Type is produced on photosensitized film and papers by contact printing from negatives, called ProFonts. A choice of 10,000 type styles in sizes 18 pt. to 90 pt. is available. Circle No. 334 on Reader Service Card.

LUDLOW TYPECASTER

The Ludlow typecasting machine, with a size range from 4 to 96 pt. on standard matrices, and up to 144 pt. and larger on special matrices, is described in an eight page folder published by Ludlow Typograph Co. Circle No. 330 on Reader Service Card.

ROUSE POWER MITERER

H. B. Rouse & Co. has published a catalog concerning its composing room equipment which includes the Rouse power miterer. Available in a bench model as well as others, the unit is said to be applicable to small and large shops. Circle No. 315 on Reader Service Card.

PHOTOMECHANICAL TYPESETTER

American Type Founders, Inc. is offering literature on its STF Typesetter which combines keyboard composition with photographic development. Type sizes range from 5 pt. to 12 pt. with line widths up to 7½ in. Circle No. 324 on Reader Service Card.

THREE MOHR SAW IMPROVEMENTS

Three major improvements in the Mohr Saw have been announced by Mohr Lino-Saw Co. Improvements illustrated and described in bulletins available for the asking. One new device is the improved unit to replace the knife block upper liner down-pressure spring for ad figure work; another device is Mohr Measurematic gauge for grocery store ad work; the third is an adjustable slug trip. Circle No. 347 on Reader Service Card.

Platemaking

STA-HI TUBULAR ROUTER

The Sta-Hi Tubular Master router is described in a four page folder issued by Sta-Hi Corporation. Close up photos show the router head and grip mechanism. Overall dimensions and specifications are included. Circle No. 344 on Reader Service Card.

PHI ELECTRIC PLATEMAKER

In a six page illustrated bulletin, Pasadena Hydraulics, Inc., describes its bench and floor model PHI hydraulic presses for rubber and plastic plate molding. In the various models, ram tonnages range from 20 to 125 T. Control instruments provided. Circle No. 351 on Reader Service Card.

WESEL ROUTER

Wesel Manufacturing Co. has released descriptive literature on the Wesel RAR-1 heavy duty router. Circle No. 321 on Reader Service Card.

MAGPLATE ENGRAVER'S METAL

Magplate photoengraver's magnesium metal is described in a folder released by Magplate Division, Brooks & Perkins Inc. Magplate is said to have a ± 0.0005 in. gauge tolerance. Circle No. 311 on Reader Service Card.

MAT MOLDING MACHINE

The Directomat direct pressure mat molding machine is described in a bulletin being offered by the Lake Erie Machinery Corp. Circle No. 306 on Reader Service Card.

ROTOFILM PROGRESS REPORT

Report on tests of Rotofilm resists in the gravure process which were made by the Positive Standards Committee are available as excerpts from a talk by F. L. Shands, Photo Products Department, E. I. du Pont de Nemours & Co. Recent improvements in Rotofilm also are cited. Circle No. 349 on Reader Service Card.

KENRO VERTICAL CAMERA

Literature on the Kenro Vertical 18 camera is available from Kenro Graphics Inc. This camera is described as being used for making line and halftone negatives; one shot, right reading photocopies; and Xerographic exposures. Circle No. 308 on Reader Service Card.

CHEMCO ROLL FILM CAMERA

A four page bulletin on the Chemco Roll Film Camera F 1212 is available from the Chemco Photoproducts Co., Inc. Illustrations and text describe how the operator can make a series of exposures without a single trip to the darkroom. Circle No. 338 on Reader Service Card.

MARK II POWDERLESS ETCHER

The Mark II powderless etching machine, designed specifically for use with zinc plates, is described in a folder issued by Tasope. This machine is built of heavy gauge stainless steel, says the sponsor. Circle No. 314 on Reader Service Card.

Pressroom

ATF CHIEF OFFSET PRESS

American Type Founders Co., Inc. has made available a 16 page booklet describing its ATF Chief 15 offset press. Detailed illustrations show paper feeder pile guides, paper separators, ball type paper guides, paper feed, gripper bite, tapered cylinder roller bearings, interchangeable ink units and variable speed controls. Circle No. 340 on Reader Service Card.

FLINT NEWSPAPER INKS

Arrowhead newspaper black and color inks are featured in a new color selector prepared by Flint Ink Corp. Circle No. 318 on Reader Service Card.

MONOMELT VACUUM CHUCK

The Air-Grip vacuum chuck is described in a folder available from the Monomelt Company, Inc. Plates are held down with atmospheric pressure of approx. 14 psi. without clamping, locking or gluing, says sponsor. Circle No. 325 on Reader Service Card.

MILLER TWO COLOR-PERFECTING PRESS

The Miller TPJ 23 in. by 36 in. press which can be run either as a two color or as a perfecting press is described in a folder released by Miller Printing Machinery Co. Sheet travel diagram for perfecting and a roller diagram plus specifications are included. Circle No. 345 on Reader Service Card.

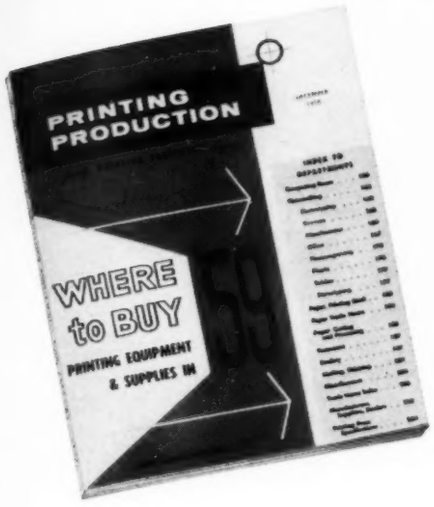
OFFSET PROOF PRESS

Literature is being offered by Vandercook & Sons, Inc. regarding the Vandercook 25-38 offset proof press with adjustable time delay control to allow sufficient time for feeding a new sheet. Features are illustrated and specifications given. Circle No. 346 on Reader Service Card.

SPHEREKOTE DRAWSHEETS

Minnesota Mining and Mfg. Co. is offering a sample swatch of its SphereKote drawsheet. These drawsheets, with beads of glass impregnated into a smooth surface, are said to resist ink transfer. Circle No. 309 on Reader Service Card.

(Continued on Page 93)



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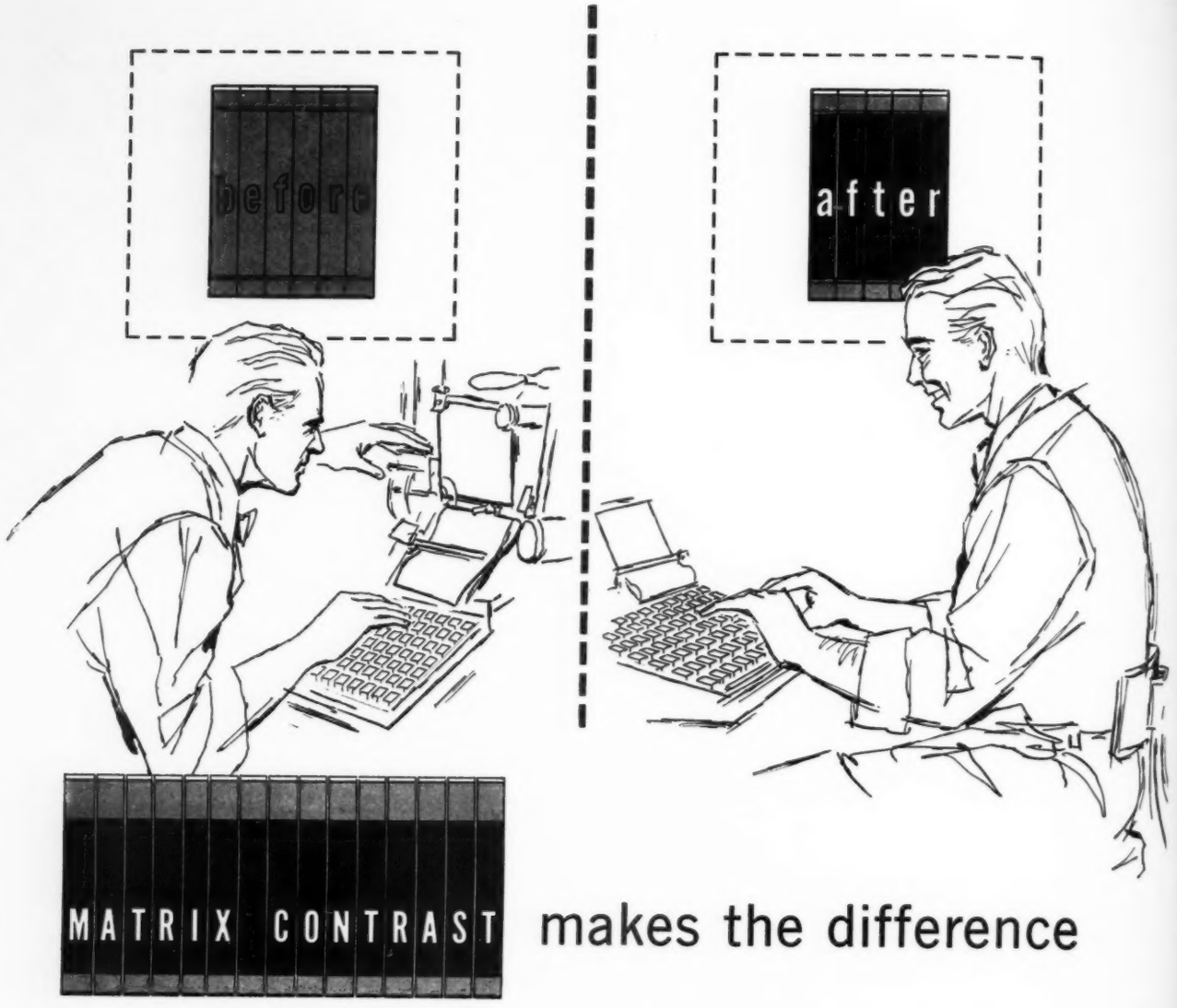

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PRINTING PRODUCTION

NOVEMBER 1958

Progress Reported

By Du Pont on

Plastic Plate

Press runs from 2000 to 1,200,000 have been obtained in the field evaluation program; variables such as ink and paper in 20 plants preclude estimating approximate plate life as yet.

THE first public demonstration of letterpress platemaking by Du Pont's experimental photopolymer (light-sensitive plastic) method was given before the Letterpress Forum, at Hotel Statler, New York, N. Y., Sept. 27. Spokesmen for Du Pont said the experimental plates have performed successfully in nine months of field-testing, but that neither commercial availability nor commercial price is yet known.

The audience saw a photopolymer plate placed in contact with a high-contrast photographic negative, exposed to an ultra-violet light source (white-flame arc lamp), simply washed out, mounted, and then run on a flatbed press, in 20 min.

Data on photopolymer field testing to date were presented by Donaldson B. Hurd, technical investigator in the field testing program.

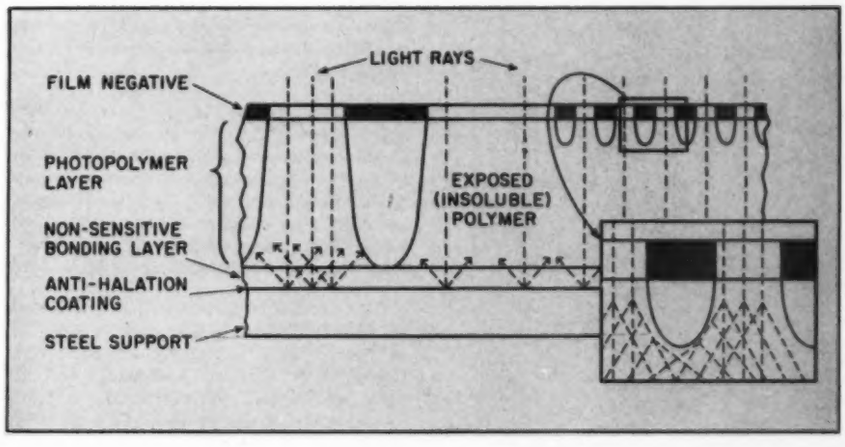
Field Test Results

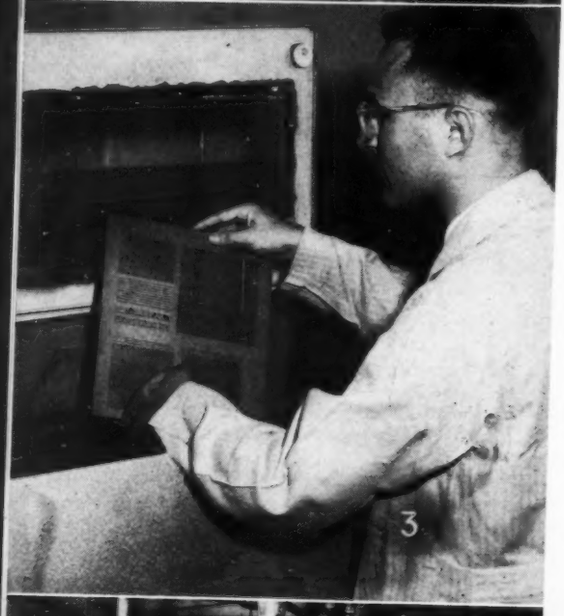
"As of Sept. 1," Hurd said, "some 1300 photopolymer printing plates, or 150,000 sq. in., had been used in regular production runs among 20 test sites in the field evaluation program." The plates used for live printing have ranged in size from 2 in. by 2 in. to 11 in. by 19 in. Hurd said, with the number of impressions in production runs varying from 2000 to 1,200,000. Many variables such as type of ink, kind of cylinder packing, press adjustment, and type of paper preclude generalizations about plate life.

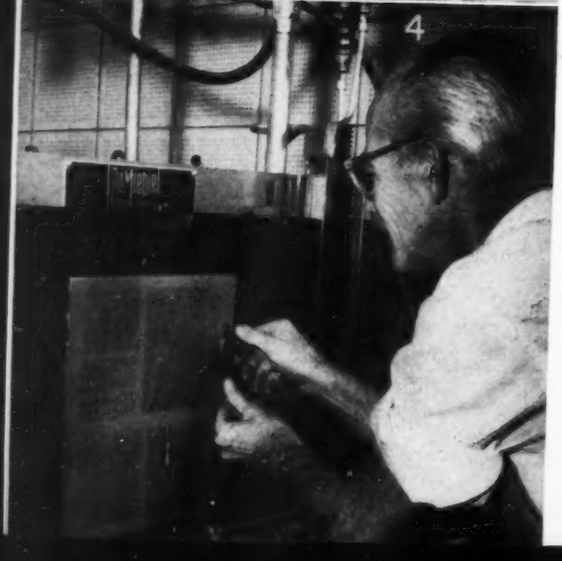
Field evaluation began in early 1958 and includes these types of printing plants: Book, periodical, packaging, business forms, newspaper and commercial.

"The main field evaluation effort thus far," Hurd continued, "has been in black-and-white printing, but some experimental work in process color has been done. No register problems have been encountered. Some field-test runs on

Cross section diagram of a Du Pont (Type 60) flexible photopolymer printing plate during exposure. The plate is composed of three layers: Steel support, non-sensitive bonding layer, and the photosensitive plastic. Ultra-violet light passing through transparent areas of the film negative penetrate the photosensitive plastic, with bounced and scattered light causing a pyramidal shaped character. Unexposed plastic remains soluble and is washed out. The non-sensitive bonding layer prevents washout down to the metal support. The effect on text matter is shown at left. In halftone areas, right, scattered and bounced light provides interlocked bases (see enlarged section of inset) for the dots, with no washout to bonding layer depth.







dry offset presses have also been made, with satisfactory results."

In discussing means of press mounting for Du Pont's three types of photopolymer plates, Hurd said the Type 152 (0.152 in. thick with 0.040 in. relief, aluminum-backed) rigid plates for flatbed application have been mounted directly on patent base. Use of the thin, flexible Type 50 (0.050 in. thick with 0.030 in. relief, steel-backed) and Type 60 (0.060 in. thick with 0.040 in. relief, steel-backed) plates on present rotary presses necessitates a buildup to printing height. Methods employed include use of a hinged saddle and a three-piece wedge-type saddle, each holding the plate mechanically to the saddle by means of crimped ends on the plates. Adhesive hold-downs on saddles have been employed also. Further study is being devoted to platemounting methods.

Types of Equipment

Equipment used for the exposure and washout of photopolymer printing plates was discussed by W. B. Gibson, supervisor, printing development laboratory services. "The equipment," Gibson said, "need not be either complex or prohibitively expensive. Du Pont has designed and built some equipment itself, and some exposure and washout experimental units have been built for Du Pont by Fairchild Graphic Equipment, Inc."

Two types of exposure and washout equipment, rotary and flat, are being used, Gibson explained. The exposure equipment consists of a vacuum frame and a white flame carbon arc lamp. Since ordinary exposure frame glass does not transmit the ultra-violet light needed for the photopolymer exposure, a sheet of Cronar polyester graphic arts film is substituted. This flexible material not only transmits UV light, but provides improved negative-plate contact.

"A flat exposure of Types 50 and 60 flexible plates later curved and printed rotary would result in some distortion," Gibson said, "but this may be eliminated by rotary exposure. The Type 50 or 60 flexible plates are placed on a vacuum cylinder, with the negative taped in position and covered by Cronar polyester film. An arc lamp exposure is made as the cylinder rotates. In either flat or rotary exposures, the light may be collimated to avoid too broad a character and dot slope in the plate. Length of exposure with present experimental equipment and procedures varies from 2 min. to 6 min., dependent upon lamp positioning for coverage of different size plates."

Ultra-violet light striking areas of photopolymer render them insoluble. After the exposure, the next step is the removal of unaffected and thus soluble plastic by means of a pressure sprayed, alkaline washout solution. Washout time with present experimental equipment and procedures is about 6 min. An inadvertent washout time somewhat longer does not damage the plate.

Equipment Availability

"Du Pont," Gibson continued, "does not plan either to build or sell platemaking equipment, or to receive royalties. Du Pont will cooperate with equipment builders to assure adequate availability of photopolymer plate processing equipment."

Based upon knowledge and experience acquired in the plate de-

1.—Shelf life of unexposed photopolymer printing plates is approx. 1 yr. Prolonged contact with air causes photosensitive plastic to become somewhat desensitized. Full sensitivity is restored by placing plates in a conditioning box 24 hrs. before use. Carbon dioxide restores plate sensitivity. The sliding yellow tinted glass cover permits quick inventory while filtering out ultra-violet light to which plates are sensitive.

2.—White flame carbon arc lamp and vacuum frame are used for flat exposures of Du Pont photopolymer printing plates. The vacuum frame glass (which absorbs ultra violet light needed to expose the plates has been replaced with Cronar film. This film platen transmits needed UV light, but also provides improved negative plate contact as well. In both flat and rotary exposures, the light may be collimated by various methods to avoid too broad a character and dot slope in the plate.

3.—A washout of the plastic unaffected during exposure of the flat plate produces the photorelief image; washout requires about 6 min. with present experimental equipment. A water rinse occurs at the end of the washout cycle, after which drying can be hastened by various means, such as compressed air. Plate then can be mounted on its base.

4.—A beveled aluminum-based photorelief Du Pont (Type 150) plastic plate is mounted on patent base for a flatbed press run. Sawing and beveling operations for the plate are routine. Further studies of plate mounting means are being made.

velopment program to date, the Du Pont photopolymer development group estimates the expenditure for platemaking equipment would be about $7 thousand. The cost, however, will be much dependent upon the amount of automation desired.

Life of Unexposed Plate

"Life of unexposed photopolymer plates," Gibson reported, "is about 1 yr. However, prolonged contact with air desensitizes raw plates somewhat. Full sensitivity is restored by placing plates in a conditioning box containing carbon dioxide, for about 24 hrs. before use. Any tight container into which the harmless CO_2 may be introduced can be used as a conditioner. The entire photopolymer platemaking process may be conducted, incidentally, under normal tungsten illumination, but exposure to direct daylight and to high UV content indoor light sources (such as some fluorescent lamps) should be avoided."

Contact with unprocessed photopolymer plates may cause a skin irritation for some personnel, he said, but this may be prevented by washing the hands with soap and water after handling unprocessed material.

Asked about corrections on photopolymer plates, Gibson replied: "In the laboratory we have made corrections by several methods, the simplest of which is to make a slug and adhere it to the metalbacking of the plate."

Regarding routing, he said: "The photopolymer process results in a high relief—a fixed relief of 0.030 in. or 0.040 in., depending upon the type plate. This minimizes the need for routing, although routing may be done by conventional methods."

Photopolymer plates are not a fire hazard, Du Pont indicated. The photopolymer will burn in contact with an open flame, but in itself will not support combustion.

Platemaking Economics

Discussing platemaking economics and further field evaluation, Hugh B. Gage, Du Pont's field testing supervisor, said: "Plates being used in the evaluation program have been arbitrarily priced at $10 per sq. ft., or 7c per sq. in.

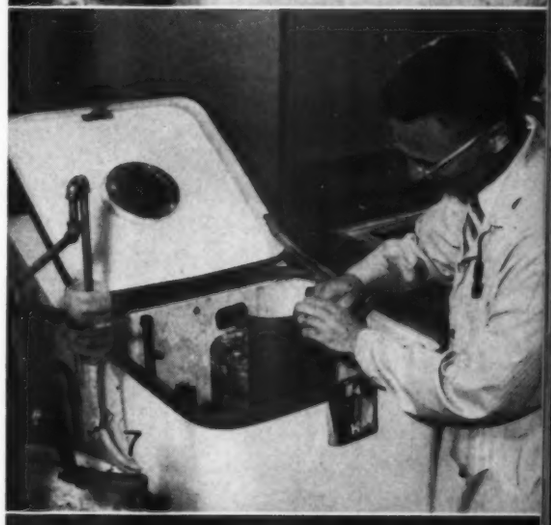
"Based upon evaluation work to date, the cost of labor, equipment investment, power, maintenance, overhead, etc., for a printing plant, or trade service, is estimated to be less than 1c per sq. in. in an annual photorelief plate production of about 1,500,000 sq. in. One operator, at 75% productive capacity, can produce up to 2,500,000 sq. in. of photorelief plates annually on one set of platemaking equipment.

Press Operation Savings

"Some press operation savings," he continued, "are foreseen by the use of maximum plate size for presses and the imposition of multiple pages on single photopolymer plates." He cautioned that economics will vary, of course, from shop to shop.

Further Research

Paul H. Smith, manager of the photopolymer plate sales development program, said: "One important result of our work has been an indication that a less costly raw plate is needed in order to enlarge considerably its market acceptance. Much effort is being expended by our research division in exploring various manufacturing processes aimed at reducing our production cost. This work will require a number of months, and its successful completion is necessary before we can make firm plans on commercialization."

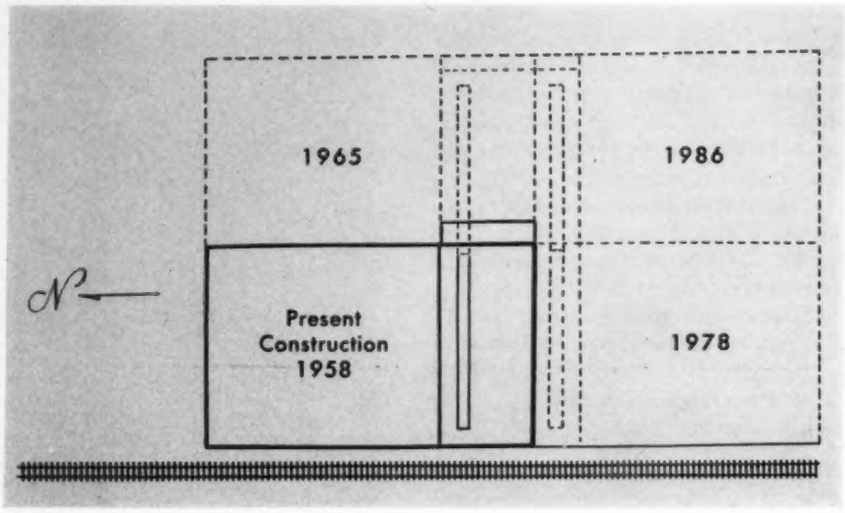


5.—For rotary printing, (Types 50 and 60) flexible photopolymer plates are exposed to a white flame carbon arc while rotating on a vacuum cylinder. Intimate negative-to-plate contact is obtained by use of Du Pont's flexible polyester film, under vacuum. This is experimental equipment.

6.—With the photopolymer method of making printing plates semi-automatic equipments for exposure and washout are used. Here are shown push button controls on a Du Pont-built experimental washout unit. Some experimental plate processing equipment has been built by Fairchild Graphic Equipment, Inc.

7.—After exposure, the Du Pont photorelief plate is placed in the washout unit. After the washout, the next step is to dry the plate previous to mounting on the press cylinder. Rapid drying can be achieved, for example, by blowing off water droplets with compressed air.

8.—A flexible Du Pont photorelief plate, with its ends crimped over a hinged saddle, is mounted on a rotary press. Hinged saddle provides a tension hold-down for plate; it's one of several methods employed to bring plates to printing height.



Four major plant expansions during the next 28 years have been planned by the St. Petersburg (Fla.) *Times*. Construction will follow the pattern set forth in this diagram.

How To Plan Ahead For 30 Years of Operation

St. Petersburg* Times *projects its growth to year of 1986 and orders 'dream press' for handling future print requirements.

WHEN the St. Petersburg (Fla.) *Times* installed the largest press battery on Florida's West Coast in 1952, management looked forward to a period of smooth mechanical operation. It worked that way for a short time, but by 1956 circulation gains and increased page demands began to set up a new squeeze between inflexible deadlines.

It was plain that the calm was soon to be broken, and if the former expansion had only been sound for four years, it was decided that this time a real bite would be taken out of the future. This time a 30 year planned expansion program was activated.

Questions To Be Answered

First, of course, was the plant itself. Should the newspaper move out of an eight-story office building to a new plant? Should new equipment be crowded somehow into the present location? Should certain production departments be moved into a new location?

Nelson Poynter, editor and president of the *Times*, assigned the problem to three executives: Cal Thomas, director of development; Don Shortell, mechanical superintendent, and Charlie Robinson, building coordinator. They, in turn called in the Methods Engineering Council which assigned R. L. Ricker as consultant.

Initial studies showed that the practical solution would be to move the pressroom, stereotype, warehouse and mailroom from the downtown location. A 9 A. site with a railroad siding was chosen.

Plant Model Aids Planning

Instead of drawing plans of the proposed new plant, a scale model of the departments involved was made up. Using the model, 14 different layout patterns were worked out; then reduced to five, and finally to the three most workable. The three layouts were studied and analyzed with every detail in mind. Each factor was projected 30 years.

Because of the complexity of many problems, the basis for each study had to come from a past performance record covering the preceding 10 years. St. Petersburg's large annual population swing complicated the figuring. Major points to be determined were the number of pages required per day, percent of black and white pages to both spot and full color pages, daily gross press run, allowable running time for each edition, rate of production needed to meet running time, and expected maximum press delivery speeds on sustained and fractional runs.

Once these figures had been projected to 1988, which was a four month job, it was possible to start planning in relation to time. It was determined that the next 30 years would require four separate expansion moves. A building was designed to be built in four stages and planned to take each enlargement without relocating equipment or impairing work efficiency.

Time motion studies revealed that the best operation could be arranged by installing two rows of presses and building two newsprint warehouses, each serving its own row of presses. Between the two press rows would be located the stereo department, strategically situated to serve both lines of presses, and the mailroom where the presses could deliver papers from both right and left sides. The double warehouse alone, it was figured, will account for a 35% savings in efficiency.

Decides on 'Dream Press'

Kind and number of presses was the next decision point. The study revealed the immediate need for nine press units, with a tenth desirable as it would be needed by 1962. Press Foreman Ben Faden was added to the planning team. The group visited a number of modern plants using principal makes of presses. This work revealed that, in Ben Faden's words: "All the manufacturers put out very good presses. Not one stands out above the rest. Each one has features the others don't have and none have come up with all the good features."

The result of this planning phase was the decision to order a press which would incorporate the necessary features required by the *Times*. This meant a specially-designed press which deviated from standard models offered by manu-

Plastic scale model of the St. Petersburg *Times'* plant in 1986 was constructed for use by planning team. Stereo and mailing operations will be located in center of building to service press rows on either side. Two newsprint warehouses are planned so each press row will be served by its own warehouse. Working with the model here are Charles L. Robinson (left), building coordinator, and John B. Olson, business manager.

facturers. The *Times* requested competitive bids on what was referred to as "their dream press."

The specifications read: "'On this press will be printed Florida's best and most colorful newspaper. The press will be located in a new pressroom which we propose to design and operate as a model. It will attract many visitors because of location. It is our intention that the machine we choose will be operated by us in a manner which will reflect credit on both the operators and the manufacturer. The excellence you design and build into your press will be realized to its fullest."

Specifies Many Features

Other points mentioned were:

(1) It must be a color press. It will be used to produce top quality full and spot color and black printing in any and all page positions at optimum operating speeds.

(2) It must be capable of expansion of color and/or black printing capacity at minimum cost at a later date. Our rate of growth indicates we may have to add capacity within as short a time as two years after installation. The basic press supplied now may be expanded ultimately to as many as 12 units with color attachments over each black impression, to as many as six webs with full color on both sides.

(3) This press must be designed for maximum ease of operation and maintenance with minimum manning.

Specific units requested by the *Times* were:

(1) Ten high speed printing units capable of quality printing at 60,000 i.p.h. and geared to that speed.

(2) Each unit equipped with double reverses and compensator in arch.

(3) Underside plate lock with circumferential and side lay adjustment on all cylinders.

(4) All ink motion to have variable stroke adjustment.

(5) Minimum aisle space of 33 in. between units.

Color attachments specified were:

Provide color plate cylinders placed as in diagram, each complete with ink motions. Each cylinder to have underside plate lock with circumferential and sidelay adjustment. Each cylinder and attendant ink motion to be fully reversible with mated black couple to which attached.

Folders for Press

Folders for the press must include:

(1) One double former double folder of the 3 to 2 ratio type, equipped with tabloid slitters on each former and capable of handling 72 pages straight or 128 pages collect at full speed of press.

(2) Product of both folders to deliver folded edge forward.

(3) One set of double upper formers arranged to receive a maximum of five webs as follows: Five from rear of folder; or one from front, four from rear.

Bars and special leads asked for were:

(1) One rear-of-folder superstructure equipped with three sets of reversible angle bars complete with all necessary slitters and driven rollers.

(2) One front-of-folder superstructure equipped with three sets of reversible angle bars complete with all necessary slitters and driven rollers.

(3) Necessary floor slots, pipe rollers and compensators for two under folder leads in either direction.

The substructure should:

Be sufficiently rigid to support the 10 printing units and one folder as heretofore specified, and arranged to accept reels, tensions and pasters as well as 50 h.p. unit type drive motors.

Reels, tensions, pasters wanted were:

(1) Ten fully automatic reels with robot (self-making) full speed pasters.

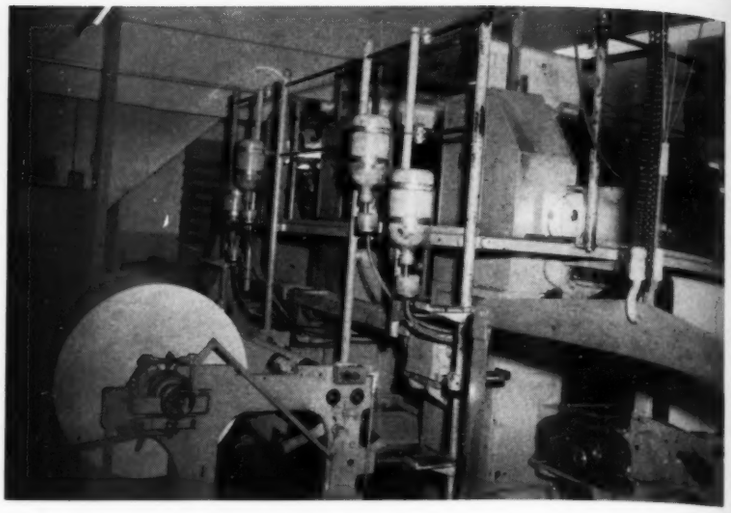
(2) Reels are to handle 42 in. diam. rolls.

(3) Reels to accommodate full range of roll widths from the maximum 68 in. down to and including 12 in. wide rolls.

Specifications were accepted and bids received from three major press manufacturers. The bid from Walter Scott & Co. was accepted. Work on the first unit of the new buiding is now in progress. While these mechanical needs were being pushed to reality, the St. Petersburg *Times* came up with a larger gain in total linage for 1957 than any other newspaper in America.

That shows why projections to meet future demands was so urgent. The future is almost here.

Kronenberg Receives NAPL Award—Recipient of the annual award to an outstanding craftsman in the lithographic industry given by National Assoc. of Photo-Lithographers is John L. Kronenberg (right), manager, Lithographic and Label Paper Div., S. D. Warren Co., Boston. It was presented at the association's recent convention by Walter E. Soderstrom (left), NAPL executive vice president.



Water reservoirs may appear out of place in a newspaper pressroom, but they are standard equipment at the Middletown (N. Y.) *Record*, a web offset printed daily.

BUSINESS GROWTH BRINGS CHANGES TO OPERATION OF

Web Offset Printed Daily

TWO years of producing a daily tabloid newspaper by the web offset process has provided the Middletown (N. Y.) *Record* broad experience in a field where there are comparatively few participants. During this time the paper has undergone several changes in its production procedure and in the principal equipment used to produce it.

Among the pioneers in producing a daily by a process which many felt was infeasible are J. M. Kaplan, founder of the *Record,* David Bernstein, editor and publisher, and Harry Milligan, general manager. The use of process and equipment has opened a relatively new frontier in newspaper printing operations.

Uses Cold Type Methods

Copy for each edition of the *Record* is set by cold type methods using Justowriter, Varityper and IBM machines. Headlines and display copy are set on a ProType photolettering unit. Platemaking equipment includes a Consolidated camera, Chemco processing equipment and Brown vacuum plate.

The typesetting and plate processing apparently posed no special difficulties to Messrs. Kaplan, Bernstein and Milligan. The original press used was a rewinding three head, webfed offset with a separate rollfed collator and folder. Rapid growth of circulation and increased number of pages made this equipment inadequate after one year.

At that time a 22¾ in. by 36 in. Hantscho web offset press, with two perfecting units and in-line folder was installed. The new press is capable of printing a 16 page tabloid-size signature at speeds up to 20,000 per hr. using a 36 in. web split at the feed end of the folder. The folder, also manufactured by George Hantscho Co., is designed to keep up with the press output.

As presently assembled the press consists of two perfecting units and folder, with one roll stand feeding from the front of the press into the No. 1 printing unit, and the second roll stand, mounted at the side between the two units, feeding into the No. 2 unit. With this arrangement, using the side roll stand, No. 2 unit can be used alone to produce eight page signatures printed two sides in one color. When feeding two webs into both units, the press produces 16 page signatures printed one color both sides. Using the front roll stand to feed through both printing units, the press produces eight page signatures printed two colors on one or both sides of the web.

Among pioneers in producing a daily newspaper by lithography are David Bernstein (left), editor and publisher, and Harry Milligan, general manager of Middletown (N. Y.) *Record*.

Unit construction of the Hantscho press permits the addition at any time of one or more extra printing units and roll stands to keep pace with future growth or requirements for additional colors. Over-all length of the *Record's* press and folder is 25 ft. An additional 25 ft. is available for future additions to the press.

A roller conveyor extends from the delivery of the folder to a counter adjacent to the feeding station of a new Sheridan inserter. As the final section is being printed, the inserter is started up. The inside sections, which are printed first, are already stacked convenient to the inserter pockets. The front section is placed on the counter from which it is picked off by the inserter operator and placed in the first pocket of the inserter.

Since the front section is being inserted simultaneously with the printing, the time lapse between the end of the press run and the delivery

from the inserter of the last completed paper is quite short. The delivery of the inserter is adjacent to the bundling tables of the shipping room to eliminate excess handling between the two operations.

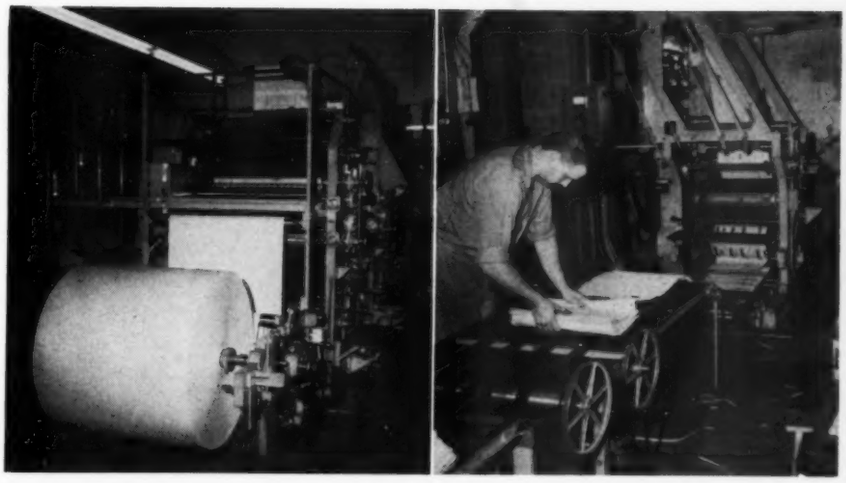
Speedy Inserting Operation

One of the new additions in the *Record* plant is a Sheridan automatic inserter which functions as a newspaper stuffing machine. The story of its installation is interesting to relate here.

The *Record,* a morning newspaper of nearly 13,000 circulation, soon found that hand insertion of the finished sections was not only costly but too slow for efficient late news coverage. With a 23 mile radius area of circulation to a number of small towns, it was essential that the *Record* be ready for truck pick up at the loading dock by 4:00 a.m. Starting the press run earlier to allow time for hand insertion meant that much of the late news from the wire service could not be included in the edition.

The problem was solved through the joint efforts of General Manager Milligan and engineers of T. W. & C. B. Sheridan Co. A model 5-E Sheridan automatic inserter with four pockets (or stations) and a standard Sheridan gang stitcher were installed minus the stitching head section. The collecting chain unit was shortened an amount equal to the width of the omitted stitching section. The latter alteration was made to conserve the available floor space in the pressroom between the press and the bundling and shipping area.

The Sheridan machine is equipped with an electronic batch counter of new design. A control box mounted on the machine contains 12 toggle switches. By proper selection of switches, a kicker at the delivery end can be set to displace one paper after the passage of any predetermined number (up to 64) of newspapers.



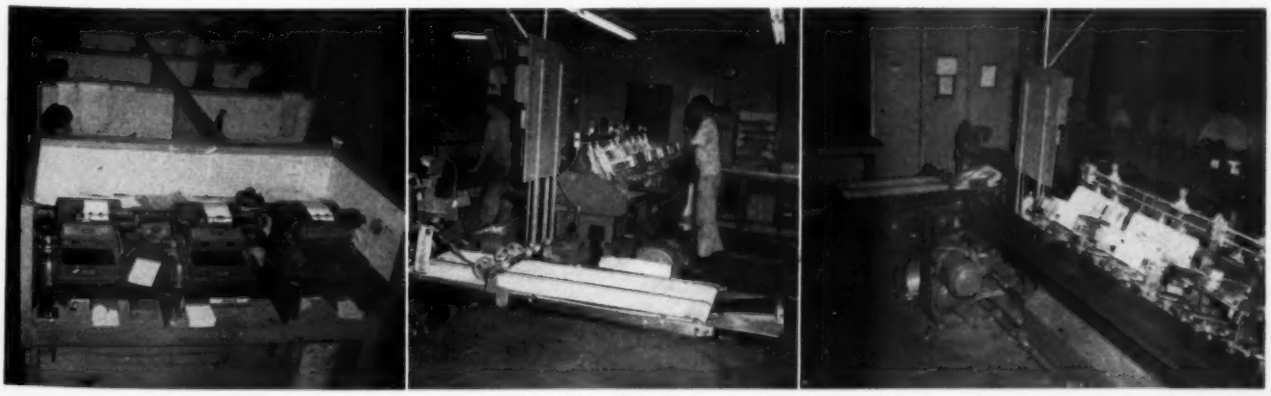
Hantscho web offset press used for printing Middletown *Record* is shown at left. Press is equipped with front and side feed roll stands for printing on two perfecting units. At right is Hantscho folder attached to press. Folder speed of 600 f.p.m. is geared to operating speed of press.

The machine is also arranged to detect and reject into a separate delivery tray any paper containing more or fewer than the proper number of signatures. This operation is performed automatically without stopping the machine or interrupting production. Measurement of thickness of complete forwarded newspapers is accomplished by a rotary caliper mounted between the last inserting pocket and the delivery section.

The machine is so constructed that additional pockets can be added to increase the number of sections that can be assembled. The present four pocket machine permits inserter to collect up to two 64 page papers of four 16 page sections.

An off-center fold which permits a 3/8 in. lap on each 16 page section is necessary for proper pick-up of the section on the inserter. It was thought this might meet with reader objections, so a public relations campaign was instituted to inform the readership that this was not a mechanical error. Readers were informed it was compensated for in the layout of the paper and that they were benefited in getting a paper containing later news. Surprisingly the readers responded favorably to the off-center fold, some saying that it acted as an index tab enabling them to turn quickly to the pictorial center spread. Others had no complaint or had not noticed the lap.

Application of the lithographic process to the newspaper field by the *Record's* two year operation is interesting. It appears the management of this newspaper has been successful in proving it could be done.



Left: Composing room of Middletown *Record* is equipped for producing copy by cold type methods. Center: Sheridan inserter in background is positioned close to press delivery conveyor to minimize handling of newspaper sections. Right: Close-up of inserting machine which handles 7000 complete papers per hour and is designed with four pockets.

Televised demonstrations of latest advances in the biggest printing process attract 2500 printers and buyers. Plate processing, press makeready, electronic scanners and photocomposition are among developments which receive attention.

UTILIZING the most advanced technique of classroom teaching, closed-circuit television, the letterpress side of the printing industry recently staged a dramatic demonstration of its progress in many areas before an audience of 2500 printing executives. The event was the Letterpress Forum held in the Hotels Statler and New Yorker, New York, N. Y., on September 27.

Main attraction was the first demonstration of the process steps in making a Du Pont photopolymer printing plate (see P. 25, this issue). Another first was the demonstration of the Consolidated Color Klischograph, a German machine designed for making color engravings. Other parts of the Forum, though not considered new, proved interesting because of the possibility of seeing actual demonstrations at close range on television screens.

These included demonstrations of the Dow powderless etching system, staged by Chemco Photoproducts Co.; the 3M makeready technique of Minnesota Mining & Mfg. Co.; the three-color process of Short Run Color Corp.; the Scan-A-Sizer electronic engraver shown by Fairchild Graphic Equipment Inc.; the electronic color scanner by Printing Developments, Inc.; the ATF Typesetter of American Type Founders Co.; a survey of future letterpress advances and the display of a mock-up of a new rotary press by Miehle Printing Press & Mfg. Co.

Concluding was a summary and analysis of the show and the future of the letterpress process by J. Homer Winkler, technical adviser, Battelle Memorial Institute, Columbus, O., together with Ben Grauer, noted radio and TV announcer.

Equipment utilized for the demonstrations was assembled together with a welter of cable, cameras, technicians, teleprompters, etc., in the showrooms of The Lawson Co., 426 W. 33rd St. However, a small battery of Miehle Vertical presses was moved in to accommodate the printing of the plates which were produced on the show. A week of rehearsal went into the presentations.

The audience came from distant points such as Australia, Sweden, and Bermuda, and also included a large Canadian group of printers. Virtually every type of operation was represented, from small weekly and commercial shops to the largest magazine, book, and newspaper plants, including buyers of printing. Nearly 1000 firms had representatives on hand. More than 50 large screen TV sets were installed for their viewing.

N. Y. Forum Reviews

LETTERPRESS GAINS

Bright future predicted for relief process

By STAFF WRITER

The idea for the forum originated a year ago with A. F. Oakes, president, Charles Francis Press, New York, N. Y. It was sponsored jointly by Printing Industry of America, Intl. Assoc. of Printing House Craftsmen, Research & Engineering Council, and administered by the Letterpress Div., New York Employing Printers Assoc. and the New York Craftsmen's Club.

First part of the program dealt

Principals in the Letterpress TV Forum await camera cue. They are, left to right: A. F. Oakes, president, Charles Francis Press, New York, and chairman of N. Y. Employing Printers Assoc.; Ben Grauer, noted radio and TV commentator, and J. Homer Winkler, technical adviser, Battelle Memorial Institute, Columbus, O.

with systems already in use and new applications of electronics to photography. The first demonstrator was Chemco's A. J. Powers, jr., who reviewed development of the powderless etching process for making magnesium and zinc photoengraved plates (see PRINTING PRODUCTION, October 1958, P. 46). A plate was processed on a powderless etching machine during the course of his talk.

Proofs from the plate then went to 3M's Melvin Gebhard who demonstrated the technique of using the 3M makeready process. The 3M machine accommodates up to a 25 in. by 72 in. proof of the job on specially coated paper. A 4000 deg. F. infrared lamp in the machine is focused on a band about ⅛ in. wide across the sheet as it revolves on a drum cylinder. The sheet is coated with a plastic which reacts to the heat exposure according to the various tonal areas. Solids rise to about 0.004 in., 25% tones to slightly less, with corresponding variances for other tones. The sheet may be dusted with a special powder which will allow colored ink to be processed on the makeready sheet. Normal processing time is 90 sec. The sheet is then placed in the press packing about 0.018 in. from the top sheet, or on larger sheets, 0.024 in.

The camera then swung to David Darvas of Short Run Color Corp. who demonstrated the making of a three-color separation with the camera produced by his firm. The process features mechanical register by means of punches on all units and a single mask which tends to sharpen transparencies. Most work is produced in 150 line screen with direct screen separation. Inks are so balanced that their blending produces the appearance of black.

Each color negative and matching plate is produced separately, but a complete set of plates can be produced in a little over 10 hrs. Transparencies can be enlarged to 17 in. by 22 in. Exposures for the mask are made using a flash lamp over the copy easel through three punched screens registered with the copy. The easel is then tilted for timed transparency exposures: 150 sec. for yellow, 75 sec. for magenta, and 50 sec. for cyan.

After a brief recess, the cameras swung to the production cycle of making plastic halftone printing plates on a Fairchild Scan-A-Sizer with Jack O. Baldwin as narrator. As he explained it, the machine is a combination of optical, electrical, and mechanical methods, and will take copy up to 18 in. by 22 in. Plates, he said, will withstand the same printing pressure as metal.

Next on the screen was the operation of the Klischograph transparency color separation platemaking device. Martin A. Ross led the demonstration for Consolidated Intl. Equipment & Supply Co. There are two machines: One for reflection, the other for transparency copy. Essentially, the parts consist of an amplifier, a scanner, and rotating plate and transparency holders.

An appropriate filter is used with each color of the transparency. Controls are set for the desired tone values by analyzing a portion of the copy under a light meter. The metal or plastic plate material is engraved by the pulsating stylus at the rate of 630 dots per sec. at an angle of 45 deg. One stylus will produce one full set of plates in screens of 65 to 133 line on magnesium, copper, zinc, aluminum or plastic. The Vario-Klischograph will enlarge or reduce while the line machine and the others operate on a 1:1 ratio. Local undercolor removal can be done by hand etching or on the machine.

Studio scene at televised Letterpress Forum held in New York. On camera is Paul H. Smith, manager of sales development, E. I. du Pont de Nemours & Co., who described new photopolymer plate. Platemaking equipment is visible in background.

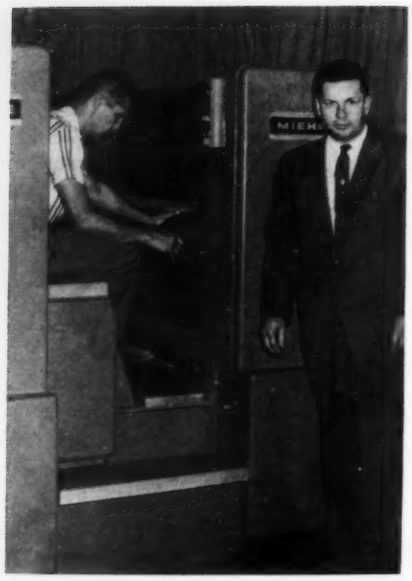
Describes PDI's Color Scanner

Printing Developments' electronic color scanner was introduced in model form by Chester Marvin. It consists of the reader, computer and translator. These scan, compute, and translate the copy, determine the degree of color masking and undercolor removal, as well as producing a black printer. Transparency copy is wrapped around a glass drum, and four sheets of unexposed film affixed on the opposite end. The assembly is run past the reading head and exposure lamps at the rate of 500 to 1000 lines per in. Synchronized speed, specially tested film stored under refrigeration, constant color temperature, and intensity at the reading and translating heads, are other features.

After a luncheon break the audience heard James V. Elliott of NYEPA review the increasing use of film in the letterpress industry After mentioning other photocomposition systems he introduced John T. Porter who demonstrated the ATF Typesetter. (See *Printing Equipment Engineer*, April 1958, P. 38.)

The demonstration of the making of a Du Pont photopolymer plate was staged by Paul H. Smith, W. B. Gibson, Hugh B. Gage, and Don B. Hurd (see P. 25, this issue).

Plates have been given field tests



Mock-up of a new medium size rotary letterpress, still in developmental stage, is explained at Letterpress TV Forum by Gilbert W. Bassett, marketing manager, Miehle Co., Div. of Miehle-Goss-Dexter, Inc.

in about 20 sites and processing tests in others, using a total of 1300 plates ranging from 2 in. by 2 in. Runs have included a 20,000 three-color page from a product brochure, 18,000 of a rotary business form; 230,000 flatbed printed cartons, and a 362,000 run on a rotary for a carton. Also, a text-and-halftone run of 442,000 and a 1,112,000 run of a line copy page on high speed periodical presses.

Letterpress in the Future

In summing up, Winkler commented that in the future there would be only one camera and plate department for all processes, which led Grauer to predict a giant jurisdictional headache. Winkler went on to say that there would be a further shrinking of direct competition between the processes, but that the nature of the job would be the final arbiter.

While the speaker speculated further regarding the years ahead, he cautioned that one must not assume that hot metal type is dying as yet. It still is the major method.

He asserted the trend toward web units with integral folders afforded the most efficient production. He predicted development of web presses with variable, removable cylinders, so that jobs of varying trim sizes could be prepared off the press while other jobs on their own cylinders were running.

Automatic and electronic controls for web tension, color intensity, and register will replace inference with observance and produce immediate correction, Winkler continued. Punched tapes for step and repeat work may lead to even more rapid and accurate multi-image platemaking.

Works to Overcome Hindrances

Asserting that more than 50% of Miehle's research dollars were assigned to letterpress research, G. W. Bassett of Miehle Printing Press & Mfg. Co. reviewed the progress depicted in the Forum. After tallying the hindrances which had caused letterpress so much grief—make-ready, plating and lineup time, and low operating speeds—he went on to cite the steps taken to whip these.

Rollfed sheet printing devices are available to combine sheet flexibility with web economy. When such units were first initiated, Bassett said, it was discovered they could not be converted from sheet to web feeding, but progress has been made so that such conversion can now be made in less than 5 min.

End-of-press folders have been tested out, but ink drying time has raised some objections which are being worked over.

Several methods of mounting single piece or multiple plates to save plating time have been examined. These include single bar clamps like those on offset presses or multiple bar arrangements or clamps which would allow the plate to be placed in four separate locations.

Problems with one piece plates that may arise are bottoming of rollers, deposits of ink on non-printing areas because of shallow etch, and buildup on the sides of low percentage dots.

Bassett described and showed pictures of the combination rubber-metal plate press installed at William Byrd Press, Richmond, Va., and then showed a mockup of the future Miehle medium size rotary press. He predicted that the plate for this process would be of considerable interest to printers in the 6 in. by 9 in. to 8½ in. by 11 in. multiples and reduce by a considerable degree the plating and makeup time.

RCA Acquires More Printing Equipment

Radio Corporation of America continues its acquisition of various kinds of equipment for use in the printing industry. Latest announcement is that in October RCA negotiated an agreement with Dow Jones & Co. whereby RCA will produce and market the Electro-Typesetter and other devices developed for the *Wall Street Journal*. It has also been reported that an electronic device is being developed for attachment to linecasting machines whereby use of the entire keyboard mechanism will be eliminated. Included in the agreement is the tape editing and collation apparatus.

The agreement was announced jointly by Pres. Bernard Kilgore of Dow Jones, publisher of the *Wall Street Journal*, and John L. Burns, RCA president. Burns announced that RCA has formed a new Automation Products department with engineering, production and marketing facilities. D. A. Thomas will direct this new department.

Kilgore announced that Dow Jones will continue its own research work under direction of J. J. Ackell, inventor of the Electro-Typesetter. These have been in use in *Journal* printing plants for more than five years. Plants are maintained in New York; Chicago; Washington, D. C.; Dallas, Tex., and in San Francisco, Calif.

Other reported interests of RCA in equipment designed for use in the printing industry are an electronic newspaper counter and a strip labeler. The sensing heads of the counter are mounted on Cutler-Hammer conveyors previous to delivery to the mailroom. (See *Printing Equipment Engineer*, P. 84, Mar. 1958.) The counter is said to be able to count up to 120,000 units per min.

The strip labeler is to be used for addressing newspapers, periodicals and other printed matter. It will print addresses on a mailing strip at 15,000 per hr.

View of breakfast meeting at Dallas PIA convention where winners of self-advertising contest were announced. At head table, left to right: Wm. Egan, convention chairman; James K. Nichols, president, Dallas Graphic Arts Assoc.; Geo. Cornelius, jr., R&EC president; Leslie Shomo, Education Council president; F. G. Betlock, vice president, Miller Ptg. Mchy. Co.; Frank Ehrenberg, UES president; Raymond Blattenberger, U. S. Public Printer; Col. H. R. Kibler, PIA president; Miss Dallas; Wm. Young, president, Miller Ptg. Mchy. Co.; Kurt E. Volk, PIA vice president; Chas. Schatvet, PIA secretary; Chas. DeVaux, Ash Kahn president; Carey Dowd III, MPS president; and Bernard Taymans, PIA general manager.

PIA Self-Advertising Awards Presented

IMPROVEMENT in content and continuity of the self-advertising produced by printing companies was a point observed by the judging group that selected this year's winners in the Printing Industry of America Printers' and Lithographers' Self-Advertising Exhibition and Awards. The activity is sponsored jointly by PIA and Miller Printing Machinery Co.

Nine representatives of the winning companies were on hand to receive prizes for their efforts at an awards breakfast meeting held at the PIA Convention, Dallas, Oct. 14. Top awards in the self-advertising campaigns received $1000 checks and Benjamin Franklin statuettes; second winners were presented statuettes. The best individual specimens of self-advertising in each category were acknowledged with the presentation of statuettes.

The panel of judges, composed of representatives of advertising and Graphic Arts organizations, mentioned a trend in the 1958 contest "toward looking for outside help for developing and creating impact promotion." They said there appeared to be a growing feeling in printing management that "while (printers) are crack professionals in the Graphic Arts, their talents are printing—not advertising."

The following are winners in the printers self-advertising campaigns:

Plants employing 1 *to* 19 *persons* —First, Bay State Press Corp., Boston; second, Commercial Printing & Letter Service Co., Dallas. Honorable mention: Curtin & Pease, Inc., Toledo, O.; Doric Press, Verona, N. J.; Kraft Printing Co., Philadelphia; P.A.P., Arcadia, Calif.; Printing, Inc., Wichita, Kan.; Frank R. Wilke Co., Milwaukee; Robert Wilmans, Printer, Inc., Dallas; Hillside Press, Los Angeles.

Plants of 20 *to* 99 *employees* — First, Duenewald Printing Corp., New York; second, Hub Offset Co., Boston. Honorable mention: Arkansas Printing & Litho Co., Little Rock; Christopher Press, Inc., Rochester, N. Y.; Douglas Offset Co., Inc., Detroit; John Green Press, Inc., Rockford, Ill.; Hawaiian Printing Co., Ltd., Honolulu; Lasky Co., Newark, N. J.; Rothchild Printing Co., New York; Rous & Mann Press, Ltd., Toronto, Can.; Wagners Printers, Davenport, Ia.

Plants of 100 *or more employees*— First, Wm. G. Johnston Co., Pittsburgh; second, Herbick & Held Printing Co., Pittsburgh. Honorable mention: McCormick - Armstrong Co., Inc., Wichita, Kan.; E. F. Schmidt Co., Milwaukee.

Top award for a self-advertising campaign among medium-size plants went to Ralph M. Duenewald (right), Duenewald Printing Co., New York, N. Y., who was presented a Ben Franklin statuette and $1000 check by Miss Dallas and PIA president, Col. H. R. Kibler.

The following are individual entry winners:

Plants of 1 *to* 19 *employees*—First, Cape & Co., Ltd., Toronto, Can.

(*Continued on Page* 94)

Winners in PIA's self-advertising contest pose with Bennies and beauty. Left to right: Ralph M. Duenewald, president, Duenewald Printing Corp., New York, N. Y.; Harry Gardner, secretary, Wm. G. Johnston Co., Pittsburgh; Willis Frank, Bay State Press Corp., Boston; Arthur H. Gratz, president, Herbick & Held Printing Co., Pittsburgh; Oliver R. Sperry, senior vice president, R. R. Donnelley & Sons Co., Chicago; Miss Dallas, who presented awards; William Carson, Cape & Co., Toronto, Can.; Penn R. Watson, sr., president, William J. Keller, Inc., Buffalo, N. Y.; Maurice Blacker, Hub Offset Co., Boston; and William Newman, Commercial Printing & Letter Service Co., Dallas.

Dallas convention of Printing Industry of America attracts 1000; Kurt E. Volk succeeds Kibler as president.

PIA'S NEWEST SERVICE

Help for Sma

HELP for the manager of a small or medium size printing plant was offered in the form of a newly-introduced management service by Printing Industry of America when it convened for its 72nd annual convention at Statler Hilton Hotel, Dallas, Tex., Oct. 13-16.

The service, prepared by Peter Becker, jr., consists of an accounting, costing and management control system which includes helpful information on job costs, estimating and production control. The system, according to Becker, also takes into consideration providing the data promptly, accurately and quickly. Time-saving principles and shortcuts are said to make it operable by any firm. Material for use with the system is scheduled to be available for distribution to PIA members in December.

Eight Checkpoints Covered

In describing the system to PIA members, Becker mentioned that it covers eight checkpoints in a printing business operation which would be helpful to a manager. Six of these checkpoints are presented in a monthly report to the manager; four of them in an optional weekly report. In both reports, emphasis is on looking ahead on operations. The remaining two checkpoints, hour costs and production standards, are covered in periodic reports, usually semi-annually.

A simplified method, said Becker, has been devised to compute budgeted hour costs semi-annually, through two schedules (payroll and fixed charges) and with three calculations. He added, with the two schedules prepared, hour costs can be calculated or revised for the average small or medium size plant in four hours or less.

The speaker mentioned several time-saving shortcuts which are featured in the system. For example, the number of operating and ballance sheet accounts is drastically reduced to those actually needed and used by the manager. In billing, three records are prepared with one writing. The payroll listing is written once a month instead of four or five times. Accounts payable list is written once, avoiding detailed posting, and eliminating rewriting name of each creditor as payment checks are sent out. A simple code number, typed on each invoice when written, permits computing profits as well as sales for each customer, or each salesman, or each process or product, as desired.

Components of System

All basic records are confined to one single record book, a loose-leaf binder. All operation data are centralized. The optional weekly report to the manager is prepared from weekly column totals; the monthly report from final monthly column totals.

The systems and procedures are presented in two manuals: (1) The Explanatory Manual, and (2) the Demonstration Manual, showing in full size, filled-in forms, actual operation for three months.

Becker said the system provides a picture of what a plant's production will be like 30 days ahead and shows the money the company has to work with 60 days ahead. This advance notice, he thought, helps production scheduling and would be an aid in watching inventories. He added, the system likewise "flags" the more important aspects of control, calls attention to situations requiring immediate management action, rather than burying them in data on relatively unimportant details.

New Officers Elected

The Dallas convention, attended by 1000 PIA members and ladies, elected Kurt E. Volk to the presidency of the association. Volk, who is president, Kurt H. Volk, Inc., Bridgeport, Conn., succeeds Col. H. R. Kibler, W. F. Hall Printing Co., Chicago. Other new officers elected were: Walter F. McArdle, president, McArdle Printing Co., Washington, D. C., vice president; Frank Pfeiffer, president, Reynolds & Reynolds, Dayton, O., secretary; and Harold N. Cornay, president, Press of H. N. Cornay, New Orleans, treasurer.

Raymond Blattenberger, Public Printer of the United States, was awarded an honorary life membership in PIA. The plaque certifying this membership was awarded by a PIA past president, Richard Jackman, Rumford Press, Concord, N. H. Jackman said the membership was given in recognition of the Public Printer's over 50 years of service and in acknowledgment of leadership in local and national activities. The A. F. Lewis Memorial Award to the Graphic Arts Man of the Year was presented to William H. Egan, president, The Egan Co.,

A "package" plan for managers of small and medium size printing plants was the technique employed by Peter Becker, jr., in introducing PIA's newest service for member plants.

By EDWARD H. OWEN,
Associate Editor

a*Medium Plants*

Raymond Blattenberger, Public Printer of the United States, received honorary membership in PIA and a hand clasp from Richard Jackman, Rumford Press, Concord, N. H., who bestowed honor.

Dallas, who also served as convention chairman.

Nearly 25 companies in the printing equipment and supply field participated in the Graphic Arts Information Show held at the Dallas convention. The exhibits consisted mainly of photographic displays of products available to the printing industry.

The 1959 PIA convention will be held at the Waldorf Astoria Hotel, New York, N. Y., in conjunction with the Graphic Arts Exposition to be held at New York's Coliseum, Sept. 6-12. Future conventions will be as follows: 1960 in Washington, D.C., at Sheraton Park Hotel in October; 1961 in Pittsburgh at Statler Hotel in September.

Responsibilities of Printers

The printing industry's responsibilities and opportunities were outlined by convention keynoter, Datus Smith, president, Franklin Publications, New York, N. Y. In his presentation he illustrated the unlimited extent of the untapped markets which await the initiative and creative thinking of printers in order to bring a greatly increased volume of production to the industry.

Among the responsibilities of printers, Smith said, is the need to recognize the stake the printing industry has in education and economic advance. The printing industry must play its part in maintaining a flow of information and must also be interested in research. He cautioned printers to guard against vulgarity in printed matter and said they should interest the general public in their industry.

The keynoter said that printing will have a responsible role in the advance of underdeveloped countries. People in foreign lands like our printing, he commented, and want to see more of it. He thought this would not compete with the domestic printing market, but will create an even larger market for printed matter. It was also his opinion that television has increased the volume of printing rather than hurt it. It has been a help more than a hindrance because of the increased printed matter necessary to sustain this growing industry. In conclusion, he suggested to printers that they let people and other printers know what they are doing.

New PIA officers for 1958-59. Left to right: Walter F. McArdle, McArdle Printing Co., Washington, D. C., vice president; Kurt E. Volk, Kurt H. Volk, Inc., Bridgeport, Conn., president, and Harold N. Cornay, Press of H. N. Cornay, New Orleans, treasurer. Not shown is Frank Pfeiffer, Reynolds & Reynolds Co., Dayton, O., secretary.

Downward Profit Trend

In his final report to PIA membership, PIA President Col. H. R. Kibler, was concerned with the downward trend in profits in the printing industry. He commented: "A declining industry invariably affects the individual companies that make up that industry. No matter how wisely a company is managed, over the long pull it suffers if the industry declines."

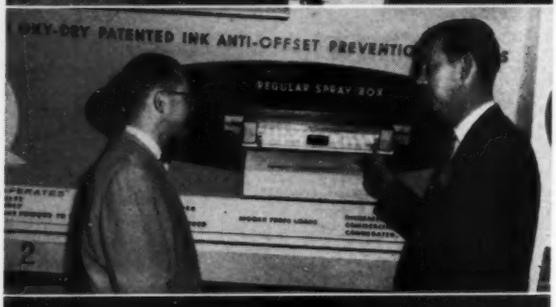
In commenting on production and research, Col. Kibler said: "Research is vital to improved production. I see a bright and encouraging outlook for our printing industry in the landmarks ahead. Many of us in the past 10 years or so have heard remarks about the inadequacy of research and engineering by our industry and improving its processes. Every company should devote some attention to development and research in its investigatory sense. Most of us do, but not nearly enough. The trend, however, is certainly encouraging."

Referring to the recently held Letterpress Forum in New York, the PIA president said that the equip-

Camera Views of PIA Convention

(All names read from left to right)

1—Fred Albus and W. R. Puglisi, Orville Dutro & Son; H. H. Krause, Martin Driscoll & Co., appear relaxed at the Information Show.



2—McLean Whittet, jr., partner, Whittet & Shepperson, Richmond, Va., gets an explanation from Frank Adams about Oxy-Dry Sprayer Corp.'s equipment.

3—Among the Texas press representation were Robert E. Harrison, assistant production manager, Leven T. Deputy, production manager, and Richard D. Blum, administrative assistant, all of the Dallas News.

4—Texans who viewed Self-Advertising Exhibit were: Don Jones and David Davey, Nichols Creative Printing Co., Dallas; Kiel Sterling, president, American Beauty Cover Co., Dallas.

Three prominent company presidents huddle at PIA convention. Ruel Harmon, president, Webb Publishing Co., St. Paul, Minn.; Mendal Segal, president, Stein Printing Co., Atlanta, Ga.; L. C. Shome, president, National Publishing Co., Washington, D. C.

ment shown would still require an even greater degree of ability on the part of the men who will operate the machines. He added: "Until someone invents the button to push the button the human factor will be of first importance.

"It serves no purpose to spend $300 thousand to $1 million for a press if you do not have men who know how to operate it efficiently and who are willing to so operate it. As we move in the direction of electronic register control, temperature control, and many other approaches to automatic quality and production control, the degree of skill of the men must increase. At present, I think we are doing an inadequate job in laying the ground work for training the proper numbers of people with the skills to meet our needs in future years. Even more important, management has not awakened to the necessity for creating the proper atmosphere in which people work best."

Presidents' Round Table

Comments by a half dozen presidents of printing companies in a round table discussion was a new feature of this year's convention program. The discussion was led by Edward McSweeney, PIA management advisor, New York. Each president revealed the particular aspect of management which contributed most to the success of his company.

There is a need, said Walter McArdle, president, McArdle Printing Co., Inc., Washington, D. C., for owners of small printing businesses to make legislative needs known to Congressmen. He believes that Congress recognizes the importance of small business remaining healthy, but suggested that printers of such establishments must speak out on occasion.

Pooling the resources of several operating printing companies affords many advantages, said Max Clarkson, president, Clarkson Press, Inc., Buffalo, N. Y. One of these is the means of installing equipment which will permit greater productivity; another would be product improvement.

Analyze Executives' Jobs

Proper utilization of key people in the organization was the success formula offered by Mendel Segal, president, Stein Printing Co., Atlanta, Ga. He suggested analyzing the duties of key executives in a printing company so high salaried people are not doing clerical work. He also advised consulting with foremen to help reach a decision on a key problem.

Richard Lea, president, Craftsman Press, Seattle, Wash., thought

Leadership Makes the Difference

(From an address by Kurt E. Volk, president, Kurt H. Volk, Inc., Bridgeport, Conn., and newly-elected PIA president, delivered at a recent Printing Industry of America Convention.)

There is only one difference between a group that can produce and a group that is nothing but a mob, and that is leadership. No group ever really becomes productive except when there is a leadership which enables the people to work together. When there is adequate leadership, then these skills, that are meaningless to each one of us as individuals, become very important to us. Leadership is the real dignity, I think, of being a supervisor.

proper communication between customer, salesman and the plant was most important. He suggested assigning a production man to confer with the salesman about a job when the order is received.

Depth in talented manpower has been the goal of National Publishing Co., Washington, D. C., said its president, Leslie C. Shomo, who is also president of the Graphic Arts Education Council. He said National is not afraid to hire people because they always intend to make a profit on everyone hired. In 1947 the company had 100 employees; it now has 400. In 1947 there were four key executives; there are now nine.

Issues Policy Manual

Understanding and definition of company policies was considered most important by Reuel D. Harmon, president, Webb Publishing Co., St. Paul, Minn. His company has issued a policy manual to help overcome any misunderstandings. It has also sorted out areas of responsibility and then held key executives accountable for their particular area.

Another PIA program innovation was a demonstration of brainstorming techniques conducted by Willard A. Pleuthner, Batten, Barton, Durstine & Osborn, New York ad agency. The presentation was designed to illustrate how printing management might utilize the facilities of present manpower to introduce ideas on new and different ways to develop new markets for printing.

Brainstormers Offer Ideas

Some of the ideas advanced by representatives of 15 Graphic Arts firms were: Sell printing on an installment basis so smaller companies will use more; print neckties on the front of shirts; specialize in a single product line; print advertising on disposable garbage bags; counsel a customer on how he can use printing to effectively sell his product or service; print nursery rhymes on macaroni; print advertising on the back of bank deposit slips; promote a color printing week; print cuff links on shirt cuffs; print grocery shopping lists for distribution in stores.

Sessions of PIA's Master Printers

Golden Anniversary Time
New York in '59

Among Those at Dallas Convention

(All names read from left to right)

1—William T. Clawson explains Harris-Intertype's interesting Ben Franklin clock to J. Tom Morgan, jr., president, Litho-Krome Co., Columbus, Ga., and Joe Braskich, treasurer, W. A. Krueger Co., Milwaukee, Wis.

2—Participating on one program were: Harold Holden, president, Holden Printing Co., Minneapolis, Minn.; Alfred M. May, president, Alfred M. May Co., Cincinnati, O.; Warren H. Deal, secretary, Agency Litho Co., Portland, Ore.; James N. Johnson, president, Standard Publishing Co., Cincinnati, O.; John Davis, jr., vice president, Judd & Detweiler, Washington, D. C.

3—Visiting with J. A. Stuart of E. I. du Pont de Nemours & Co. at Du Pont's booth were Dick Hosley, sales manager, Rotolith Ltd., Dallas, and Doug MacMoy, Stecher-Traung Lithograph Co., San Francisco.

4—Examining a copy of *Printing Production* are: Earl J. Dewhirst, treasurer, American Printing Co., Washington, D. C.; Dial H. Elkins, president, Batt, Bates & Co., Washington, D. C.; George R. Hubbard, jr., Hubbard, Inc., Bridgeport, Conn.

5—Wm. R. Brown, president, Charles E. Brown Printing Co., Kansas City, Mo., and F. J. Morrill, president, George D. Barnard Co., St. Louis, receive some information from Thomas F. Swanson, assistant director of sales, Didde-Glaser, Inc.

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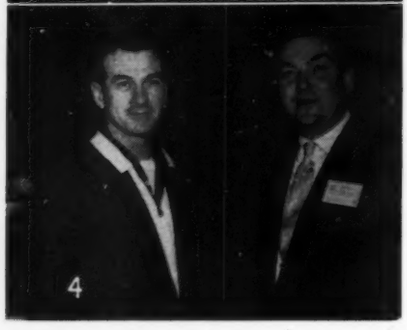

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Pictured at PIA Convention

(All names read from left to right)

1—Henry N. Levine, president, Mercury Lithographing Corp., Brooklyn, N. Y., chats with William W. Fisher, president of American Type Founders Co.

2—Roy Cowan, president, Southwest Printing Co., Dallas, and W. Marion Newman, jr., president, Commercial Printing & Letter Service Co., Dallas, were interested in the Self-Advertising Exhibit.

3—Cowboy clad Ted Reiff, general manager, Prompt Printing Co., Cleveland, in serious discussion with George Morrison, Ludlow Typograph Co.

4—Herbert Morrow, jr., general manager, Editor's Press, Washington, D. C., and George Cornelius, jr., president, Cornelius Printing Co., Indianapolis, and president, Research and Engineering Council.

Section were conducted under the direction of its president, W. Carey Dowd, III, Dowd Press, Charlotte, N. C. One of the principal speakers was Allan Shivers, former governor of Texas.

Presiding at the meetings of the Union Employers Section was its president, Francis N. Ehrenberg, Blanchard Press, Inc., New York. Major Gen. Carl L. Phinney was a featured speaker.

Other PIA sections which conducted meetings in Dallas were the Trade Binders Section and Rotary Business Forms Section.

In an action by its Board of Directors, PIA increased its level of operations from its previous budget of $270,000 to a new budget of $301,000. The additional funds will be used primarily in PIA's program for assisting its member companies in gaining benefit from its services.

Test for Offset Press Bearer Pressure

A test for offset press bearer pressure is offered by the Lithographic Div., New York Employing Printers Assoc., Inc., in a bulletin to its members.

Bearers have several functions that are of value to pressmen. They simplify the job of cylinder alignment, insure a perfect mesh between plate cylinder gear and blanket cylinder gear, and are used as a reference in checking packing thickness. Bearers are found on all American-built offset presses, with the exception of some duplicators.

One of the most important functions of bearers is the driving traction they afford between plate and blanket cylinders. This traction takes over the duties of the gears during impression and thus affords a smooth rolling action between cylinders even with slightly worn gears.

To maintain the valuable traction, the bearers must be in firm contact. The contact pressure between bearers must be more than that caused by the weight of the upper cylinder. Otherwise, the tendency of the blanket to drive the plate through surface contact will put a load on the gear teeth. When this happens, the gears are acting as brakes. Much smoother operation results when the bearers are used for braking action.

The following method is helpful in checking and adjusting bearers:

With the press packed normally, throw on the pressure and inch press to a point where the leading edge of blanket is about to contact the plate. Put marks on both blanket bearers, using a soft pencil, crayon, or ink rubbed down thin. Bearers must be clean for a good test. Next, place a sheet of paper, 0.004 in. to 0.005 in., on the blanket and smooth it flat so that it will not wrinkle.

With the pressure on, the sheet can be run through the press either by hand or power. Cylinders should be permitted to make only one revolution. If this operation results that a sheet of paper must always in a satisfactory transfer of the marks, the bearers are tight; if not, they must be set tighter. Note that a sheet of paper must always be placed between blanket and plate, otherwise test is of no value.

NYEPA Offers Printing Courses

Evening courses in printing and related subjects are being offered for the 42nd year by New York Employing Printers Assoc., New York, N. Y., to personnel in advertising, printing, publishing, and printing buying offices.

Following are courses being offered: Advertising Layout and Typographic Design, Advertising Typography, Cost Accounting for Printers and Lithographers, Elements of Printing and Printing Processes, Elements of Offset Lithography, Estimating Offset Lithography, Estimating Letterpress, Paper and its Manufacture, Proofreading, Revising and Copyreading, and Selling Printing for Better Business.

Three conference courses, Financial Management for Profit, Planning Production for Profit, and Executive Development, are being offered to key personnel.

Application for enrollment must be made in person at the Association's headquarters, 461 Eighth Ave., New York 1, N. Y.

Need for Newspaper ROP COLOR

. . . Williams says coordination among agencies and material suppliers will bring constant reproduction.

IN excess of 1000 newspaper people—advertising, editorial, production and mechanical executives, and equipment and supplier representatives attended the ROP Color Conference in New York, N. Y., Sept. 15-17. The conference was held at the Waldorf-Astoria hotel. J. Rufus Doig, of O'Mara & Ormsbee, New York, N. Y., was general chairman.

So far as the reproduction processes of daily newspaper color are concerned, it seemed that the dominant note was expressed by Cranston Williams, ANPA general manager. In his address, Williams said: "I am glad to emphasize now the need for more *coordination* among all persons and concerns involved in the production of daily newspaper color. It is my personal opinion that what we need right now is better coordination. There is much known now in the entire area—the need is to make known to everyone what is already available." In relation to color Williams discussed the services already available from the ANPA Research Institute, Mechanical Committee and the joint ANPA-AAAA committee all of which have devoted much effort in solving problems associated with color reproduction.

Survey Results Impressive

A report on a survey made by Association of National Advertisers, was presented by Anton W. Bondy, media manager of Print, Lever Brothers Co. Bondy is chairman of the ANA newspaper advertising service committee.

Bondy referred to the ANPA's Bureau of Advertising report that $757,401,000 was spent for newspaper advertising space by national advertisers last year. The ANA committee sent questionnaires to advertising executives of newspapers whose companies spent a combined total of $251,389,000 for advertising space in daily newspapers. The companies replying accounted for one out of every three national advertising dollars invested in newspapers last year. Approx. 54% of the companies advertising in daily newspapers in 1957 or 1958 used ROP color in varying extent during this two year period.

Mechanical Production Panel

So far as the production and mechanical executive personnel of newspaper plants was concerned, the *Mechanical Production Session on Newspaper Color* was the highlight of the entire conference.

Harry Eybers, production manager of the Washington (D. C.) *Post* and *Times-Herald,* presided at both sessions on Tuesday afternoon and Wednesday morning.

The panel consisted of the following: Philip Barbieri, art director, and Frank Stolz, production manager, both of Batten, Barton, Durstine & Osborn, Inc.; C. L. (Doc) Parsons, production manager, Young & Rubicam, Inc.; Milton Sutter, production manager, Cunningham & Walsh; Michael Winow, production manager, Ogilvy, Benson & Mather; George Andrew of Sullivan, Stauffer, Colwell & Bayless.

William Westerman, art director and color coordinator, Milwaukee (Wis.) *Journal.*

Gerry Burke, production manager, San Diego (Calif.) *Union* and *Tribune;* Ted DePeugh, stereotype superintendent, Miami (Fla.) *Herald;* Joseph E. McMullen, vice president, Milwaukee (Wis.) *Journal.*

Richard E. Lewis, manager, ANPA Mechanical Dept.

Vernon R. Spitaleri, executive vice president, Sta-Hi Corporation; Don Lytle, Lake Shore Electrotype Div., Electrographic Corporation.

Color is Here Now

A question carried over from the Atlantic City (N. J.) ANPA Mechanical Conference last June was answered in a prepared statement by Spitaleri. The question was: *Where is ROP Going?* The questioner intimated that newspaper color had a long way to go before reproduction quality would make it the effective medium it should be. He asserted that full color is here. Properly conceived and executed newspaper color has made possible effective full use of full color in newspapers—not in the near future, but *now.*

He said: "If agencies, newspapers and suppliers as well as all of us concerned, would direct the energy and ingenuity presently expanded to develop excuses for poor results and channel all this energy into positive action to lick the problems involved, we would make tremendous strides forward."

He concluded: "Agencies themselves have the greatest power to bring about substantial improvement in newspaper color reproduction: (1) Drop poor quality papers off schedules and tell the publisher in each instance why he is being dropped. I believe the laggards in quality would get into line fast. Meanwhile, let's not indict an entire industry for these few laggards.

"(2) Agencies should insist that their engravers supply them proofs pulled with standard ANPA-AAAA process color inks on garden variety newsprint without makeready and no manipulation.

"(3) Agencies should insist that ANPA-AAAA standard inks be used not only by their engravers but by the newspapers as well."

It was suggested by a newspaper executive that the ANPA Color Service furnish a return postcard to accompany all ROP color orders. Spaces on the card would be provided for name of newspaper, the ad referred to, together with com-

(Continued on Page 94)

Fire breaks out in the newspaper printing plant of Allied Newspapers, Grove City, Pa. Girl running at right is Publisher Hassler's daughter, Pamela, a reporter, who feared her father was trapped in burning building.

What Happens When Fire Strikes a Newspaper Plant

By EDGAR S. HASSLER, *Publisher, Allied Newspapers, Grove City, Pa.*

WHAT happens when a disastrous fire strikes the heart of a small newspaper's operations—its composing room?

We had this question answered in dramatic fashion last August when fire destroyed our composing room at Grove City. The fire itself has taught us some lessons and given us a new outlook in the newspaper business.

To understand the effects of the fire it is necessary to explain our production setup. Allied Newspapers operates two plants. The largest is the one in Grove City where the fire occurred and which prints four small town newspapers.

Production Setup

This plant prints five editions a week and also produces the composition for the commercial printing plant in Mercer, Pa. When we lost the composing room with its complement of two Linotype and three Intertype machines, Ludlow equipment, necessary saws, casting box, makeup tables and other assorted equipment it appeared to be a death blow to our operations.

The fire of undetermined origin broke out in the basement just before press time for the Tuesday edition. Billowing clouds of smoke quickly rolled out of both ends of the building. Several firemen were overcome by smoke in an effort to get at the source of the blaze.

Even while firefighters opened their hoses to thoroughly soak the basement, the press began its run on that day's newspaper. Suddenly there was a ripping crash. The composing room floor, weakened by the fire under an ad machine, had let the Intertype break through and drop with a horrible crash into the basement. One after another four of the machines ripped loose and crashed down.

It was probably our lowest point of this entire experience.

Composing Room Destroyed

With one side of the composing room gone the flames crossed to the other side and the assembling equipment went into the basement through the weakened floor. The saws, Ludlow and other equipment crashed into the basement. In two hours we were facing ruin. The composing room was gone.

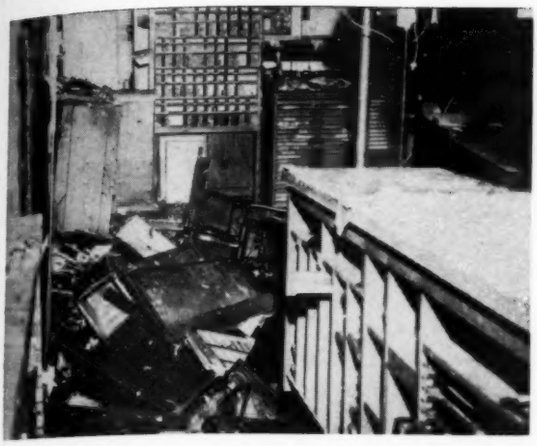
Then came the turning point. Members of our organization, hurriedly assembled by news of the fire, offered plans of action for quickly rebuilding the business. The planning started even while the smoke towered over the building and water was being poured on the flames.

George Ketler, business manager, was to collect, immediately, all our accounts receivable. Miss Frances Moore, assistant publisher, wired machinery companies for help. We had decided to stay in business.

The next morning the bankers of Grove City extended an offer of any sum necessary to reequip the plant. Phone calls, telegrams and messages offering help came from neighboring publishers. Temporary offices were offered by the Grove City National Bank.

Our friends in Cambridge Springs, Pa., offered their composing room, so our people worked

Wreckage in the composing room of Allied Newspapers, Grove City, Pa. Linecasting machines dropped through floor weakened by fire into basement of plant. Fire, which was of undetermined origin, started in basement.



Another view of the composing room showing more destruction which occurred when floor caved in. This department was virtually a total loss. Other newspapers, suppliers and friends quickly helped newspaper recover.

nights to make up pages which were brought to Grove City for printing. We soon decided to empty our newsprint warehouse and began to arrange temporary makeup tables and lights for use as a composing room.

One important thing was quickly learned: We abandoned the saying, "We always have done it that way." We have tried new ways of production. The old methods were burned away.

Suppliers Act Quickly

We also learned we could quickly depend upon our suppliers to come through in an emergency. By noon on the day after the fire representatives of equipment manufacturers were with us. Between trying to assemble copy we held conferences on the type of new composing machines needed, chose new type faces, and gave attention to a multitude of details necessary to establish a new composing room.

By Friday of the week of the fire we ordered four new Linotype machines, two to be equipped with Teletypesetter units and the other two equipped as ad and job machines. New type faces were picked up on Saturday.

Mergenthaler Linotype Co. quickly swung into action. A Comet and Model 31 machines were shipped the same day of the order from its Cleveland agency. The following Wednesday a Meteor 5 left the company's Brooklyn factory. On Friday of the same week a fully-erected Rangemaster was taken from the Chicago agency's showroom and shipped direct to Grove City.

Within two weeks we were self-sufficient. True we are cramped. Our offices smell of smoke and the carpenters' hammers pound in our ears, but we are publishing in our own quarters. Some day we will be back in our former quarters completely. The warehouse will have newsprint only in it and we won't be standing on each other's feet.

Temporary composing room of Allied Newspapers, Grove City, Pa., is equipped with four new Linotype machines, two of them with Teletypesetter units. This department presently operates in what formerly was the paper storage area while burned out quarters are being renovated. Shown in the picture are: Mrs. David F. Reed; P. J. Rogers (standing), service engineer, Mergenthaler Linotype Co.; Allyn Brown, production manager, and Donald Gale.

Flexographic Technical Assoc. Elects Officers

An organizational meeting of the newly formed Flexographic Technical Assoc. was held recently in New York with more than 100 persons in attendance. Officers were elected and 18 board members were chosen.

New officers are: Karl L. Welk, Cello-Foil Products, Battle Creek, Mich., president; Frank Longenecker, Simplex Paper Box Co., Lancaster, Pa., and Franklin Moss, Mosstype Corp., Waldwick, N. J., vice presidents; Douglas E. Tuttle, Interchemical Corporation, New York, N. Y., secretary, and Sidney S. Shapiro, Bensing Bros. & Deeney, Philadelphia, treasurer.

Chairman Franklin Moss, who presided during the meeting, said that some of the possible projects of the Association might include studies, tests, and research on standardization of materials, supplies and techniques, plus gathering and evaluating technical information pertinent to the flexographic industry. A step in the direction of problem study was the formation of a technical committee on printing, headed by Frank Brey, Paramount Paper Products Co., Omaha, Neb.; a committee on machinery and equipment, headed by Robert Zuckerman, Kidder Press Co., Dover, N. H., and a supplies and materials committee headed by A. R. Bradie.

Next meeting of the Association will be announced later and is to be held before February 15, 1959. Membership inquiries should be directed to Douglas E. Tuttle, Interchemical Corp., 67 W. 44th St., New York 36, N. Y.

Lithoplate Offers Slide Film

A color, sound slide film on presensitized offset plates, entitled, *Breaking the Profit Barrier*, has been produced by Lithoplate Inc., Sub. Harris-Intertype Corp. Covered in the slide film are such subjects as the difference between negative and positive working diazos, schematics showing the manufacturing principles from raw aluminum to finished plate, and recommended processing techniques. According to Lithoplate, the film is intended to show the advantages in the use of presensitized plates. It is available to all Graphic Arts groups from Lithoplate Inc., 278 N. Arden Drive, El Monte, Calif.

Part II of a four part series on handling paper in the pressroom. Causes and remedies for picking are explained. Ink drying properties discussed in practical detail.

Have you worried about

PAPER PICKING?

Causes and helpful remedies are discussed

By BYRON L. WHEMHOFF

PICKING on sheet fed multicolor presses often occurs at the start of a run, even when the paper is of sufficient surface strength for use under normal printing conditions. This is because the ink is unduly tacky due to cold plates and rollers, and for that matter the ink itself is colder at the start of a run than after the press has been running an hour or so. Temporary softening of the inks is resorted to in such cases, not because the paper is defective, but merely to keep the press running until operating conditions become normal. This does not take long, and subsequent additions of ink to the fountain should be of the standard degrees of tackiness.

Paper on which two inks are to be superimposed wet must of necessity have a higher surface strength than that required for one ink alone and likewise a paper on which four inks are to be applied wet must still be stronger than one intended for two colors. Practically, in making paper, the surface strength required for single color work is usually sufficient to permit satisfactory printing of two colors wet. One additional factor to be considered in determining the minimum surface strength requirements is the area to be printed. The tendency to pick is much greater in the case of solid areas than in the case of screened surfaces of the same size.

Multi-color wet printing in letterpress and offset, whether in two or more colors at a time, involves the use of inks of varying degrees of tackiness. The first ink put on the paper must be tackier than the second and so on up to the limit of colors applied at one time. In this way, each ink being tackier than the one following it, lifts the following ink off the plate.

If the tackiness of the inks were reversed or even not greatly different, the inks on successive plates would tend to pick the preceding inks off the paper, resulting in mixing and distorted, muddy colors. Inks that lift properly off the plate are said to trap each other. It follows from the above that the paper surface must not only be strong enough to pick the first and tackiest ink off its plate, but also to withstand the subsequent pulling action of the following lower tack inks. A paper might be strong enough on the surface to apparently lift off the first ink satisfactorily, but in so doing, the surface may be weakened to such an extent that the lesser pull exerted by the succeeding inks will cause it to pick.

If picking occurs, the best remedy is to soften the ink. Where two or more colors are superimposed wet, not only the first down ink but also the succeeding inks must be softened in order to maintain the correct difference in tack. While it is true that picking may in some cases be overcome by ink softening, it is equally true that the printed results are never as good as when full tack inks are used.

Measuring Surface Strength

There are several methods of measuring surface strength, all of which have their limitations. The most generally used test is the Dennison wax test, in which a series of graded waxes are applied to the surface of the paper after the ends of the wax sticks have been melted.

As soon as the hot wax has cooled, in 10 to 15 min., the wax sticks are pulled off the paper at right angles to the suface with a jerking action. Both the paper surface and the end of the wax stick must be inspected for signs of picking.

On coated papers, there is at times a coating pick in fine particles which cannot be noted on the paper but will show up as fine white specks on the end of the wax stick. Coated and uncoated papers respond differently to the waxes. The wax number that is OK on one kind is not necessarily the same as the one for the other kind of paper.

The surface strength or wax test requirements vary not only in the kind of printing and press speed, but also in the kind of inks and the number of inks superimposed wet.

Rotogravure inks have but little tack. Although all are applied on the same pass through the press, each is dried before the next is ap-

plied, thereby bringing in no question of additional surface strength requirements.

Use of Test Waxes

Generally speaking, uncoated letterpress papers for single color work should be OK to a No. 4A wax. For two colors, or four colors applied two at a time, OK to No. 7A is usually ample. However, for four colors wet, the paper should be safe to No. 9A wax. The above figures apply particularly to sheet printing and to web press work where oil base inks are used.

Heat-set inks, used principally on web presses, have less tack than oil base inks, and the paper used for such work need not be of as high surface strength as for oil base inks. Frequently paper safe to No. 4A wax will run without picking with heat-set inks.

The surface strength requirements for coated and machine coated letterpress papers follow the same trend as those of uncoated papers, but as previously mentioned, the figures are usually different. A minimum of safe to No. 4A wax is desirable in all cases, as a lower strength frequently accompanies dusting.

For sheet work, safe to No. 4A wax, is OK. Two or more colors applied at a time require a higher strength, usually safe to No. 7A wax. Machine coated papers are seldom if ever used on web presses except with heat-set inks. Here the surface strength requirements vary according to press speed, ink coverage, etc. Paper safe to No. 4A wax will run satisfactorily on most jobs, but heavy ink coverage may require as high as safe to No. 7A.

A higher surface strength is required for uncoated offset paper than for the corresponding letterpress paper. For uncoated papers, safe to No. 9A wax is ordinarily satisfactory in sheet printing, although safe to No. 11A may be required in heavier subjects. Extreme cases have been found where the coverage is very heavy and only paper safe to No. 13A wax will work properly.

As in the case of uncoated papers machine coated offset papers require a higher surface strength than do letterpress or gravure papers. A minimum of safe to No. 9A wax will usually be found satisfactory for all work up to and including four colors wet. A lower strength may give trouble even in single color work.

Cooperative study by the printer and the papermaker will result in the determination of the minimum, but not average wax number or other surface strength test, which a given paper must pass in order to insure no picking on a certain class of work at definite press speeds.

There is no apparent relationship between the wax tests on different kinds of paper, even when used on the same presses, with the same inks and even on the same forms. This is probably due to the different way in which the wax adheres to the various paper surfaces. There is, however, a relationship between the wax test and picking for each kind of paper.

A trouble related to picking and which requires the same remedy on the press is dusting. This occurs principally on book papers when the filler is not properly bound into the sheet. When this happens, the ink on the plate picks the filler off the paper, and in a short time the plates are filled up.

The effect of the filler piled upon the plate differs from that of picking in that the areas are much larger and often the design on the plate still shows through, although in a very muddy manner. When dusting is bad, it may be found necessary to stop the press and clean up on the accumulated dust from the working parts as well as from the printing plates, unless a sheet cleaner is used on the press.

Ink Drying Properties

The selection of the proper ink for a given job is a matter for the printer and inkmaker, and is governed by the subject matter, the kind of paper and the equipment used in printing.

The physical characteristics of an ink must be such that it will work satisfactorily on the press for which it is intended and print and dry properly on the paper for which it was made. Inks can be modified to overcome troubles caused by defective or non-uniform paper, but only at the expense of the quality of the finished job. The cleanest printing, letterpress or offset, is done with inks that are as stiff and tacky as the process and paper will allow. Rotogravure ink is thin with practically no tack.

Each kind of printing carries its own ink requirements and limitations. News ink for instance, which dries by absorption, cannot be used on high grade book or magazine work on a web press even though both kinds of work are done on letterpress web presses. The papers used in book or magazine work require different kinds of inks than does newsprint, and the printer must use the correct ink for the paper. Oil base process inks dry

(*Continued on Page 70*)

R&EC Seminar with German Specialists—A seminar sponsored by the Committee on Engineering and Materials Handling, Research and Engineering Council of the Graphic Arts Industry, Inc., was held with the German printing plant installation study team in Washington, D. C. The German team was made up of eight specialists who are taking part in the planning of a $4½ million printing center in Berlin. Participants in the seminar included (standing left to right): C. M. Flint, Chas. T. Main Inc., Boston; Paul Lyle, Western Printing and Litho. Co., Racine, Wis.; George H. Cornelius jr., R&EC president, Cornelius Printing Co., Indianapolis, Ind.; Werner Schwark, Eberhard Gottwald, and Alan S. Holliday, R&EC vice president, Craftsman, Inc., Kutztown, Pa. Among the German Graphic Arts team were (seated) Klaus Steinger, Walter Ott, Hans Mootz, Heinrich Kirch, Alfred Wasche, and Walter Furst.

Diversified Program Planned for PIA's Fourth Production Conference

Printing Industry of America's Committee on Production Management is planning its Fourth Production Conference, to be held at the Hotel Edgewater Beach, Chicago Dec. 4-5. *Jetlining Your Production* will be the theme for the conference which will cover such topics as quality, productivity, methods, personnel, production control, cost reduction and new developments. Harold N. Cornay, Press of H. N. Cornay, New Orleans, La., is conference chairman.

The keynote address, *Super-Vision vs. Supervision,* will deal with the subject of how to get better quality and better production through management, methods and implementation. A talk on how to make a job easier by eliminating trouble before it happens through control of incoming materials such as paper, plates, type, etc. will follow. Other subjects to be covered in the first day's session include a talk entitled, *What Are the Speed Limits in Your Plant,* and a group discussion on *Handling Different Types of Workers,* which will consider management and human relations problems.

Cost Reduction Techniques

An address entitled, *Methods for reducing Costs by Better Utilization of Manpower, Materials or Machines,* will open the second day's program. Several different cost reduction techniques will be described and a case history will be given to illustrate different phases of cost reduction through an entire plant. Concurrent seminars on *Better Utilization of People, Better Utilization of Materials,* and *Better Utilization of Equipment* are planned. Each subject will be further classified by size of plant.

A panel presentation on new developments in equipment and materials will occur during the closing session. Qualified authorities in the field of new printing development will outline changes to expect in printing processes, from preparation of copy through the delivery of the finished product.

In conjunction with the Production Conference, the second PIA Production Management Seminar will be held at the Hotel Edgewater Beach, Dec. 1-3. This seminar will be devoted essentially to a discussion of the principles contained in the book, *Management of Printing Production,* prepared for PIA by Robert H. Roy, Dean of the School of Engineering, Johns Hopkins University, Baltimore, Md. Organization for production, production control, inspection and quality, materials handling, and human relations are among the topics to be discussed. The seminar, limited to the first 35 production executives who enroll, will be conducted by Joseph Cangalosi, National Publishing Co., Washington, D. C.

Registration for the Production Conference is $75 and registration for the Production Management Seminar is $100. A package registration for the combination conference and seminar is $150. More information may be obtained from Harold N. Cornay, chairman, PIA Committee of Production Management, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Two-lobe Cam Improves Color Print

In connection with printing color in regular editions of the Hastings (Neb.) *Tribune,* Pressroom Foreman Wayne Bunch devised a two-lobe cam to operate the auxiliary fountain ductor roller.

When color printing consisted of a few type lines or spots of color, the auxiliary color fountain served the purpose. Now, when advertisers want large areas of solid color or full page tint blocks, the auxiliary fountain distributing mechanism was found to be inadequate. The auxiliary color fountain on the press, of course, will supply enough color ink but only by opening the blade too much so that some of the ink drips through. In this case, the ductor transfers the ink in a heavy strip instead of an even film. This heavy strip of ink carries through the press rollers to the plate. Two or three papers out of each 12½ show stripes of heavy ink crosswise of the color impression.

By using the two-lobe (bactrian) cam shown in the illustration, instead of the original one-lobe cam, the heavy strip of ink is smoothed out by the press rollers before it reaches the plate. The fountain blade need not be opened as much. The auxiliary fountain is of the undershot blade job press type. The fountain is bolted onto the frame of the Duplex standard tubular press.

It will be seen that by using the two-lobe cam, half as much ink twice as often is supplied and the trouble with streaking of the color ink is eliminated. Since the center bearing of the cam serves as a coupling between the fountain roller shaft and the extension shaft on which the drive gear is mounted, it takes only 3 min. to change cams.

View of two-lobe cam for auxiliary fountain color printing applied to Duplex tubular press in plant of Hastings (Neb.) *Tribune* by Wayne Bunch. The cam replaces the original one-lobe cam. With the new cam, color ink can be controlled better by distributing ink to eliminate streaks. In this illustration the drive gear extension shaft has been disconnected from the cam. The cam, besides operating the ductor roller, also serves as a coupling.

The cam shaft is 1⅛ in. diam. The tread width of both lobes on the cam is ⅞ in. The tread length of each of the two lobes is 2¼ in., or a total tread length of 4½ in. as compared to 3 in. on the single-lobe cam. Radius of both cams is 1 11/16 in.

Free Plant Layout Advice Available from Lanston

A new plant layout service is being offered by Lanston Monotype Co.'s Photo-mechanical Equipment Div., which provides the printer with a scaled blueprint of floor space requirements for platemaking

Tools of the new Lanston plant layout engineering service include scale templates of equipment, coordinating layout sheets, and the Lanston Equipment Selector which is cross indexed to cover all current presses by model and plate size.

and camera equipment and a detailed equipment layout designed for maximum production efficiency. "Provision has been made to make use of such equipment as is already in the printer's plant," says Lanston Monotype's Carl C. Sorensen.

Part of the kit used in the plant layout service is an Equipment Selector which is indexed by press model, by maximum plate size and by camera size requirements. A second section of the Selector includes a listing of Lanston platemaking equipment best suited to an indicated group of presses. Lanston cameras and auxiliary negative making equipment are listed in a third section.

Inquiries and requests for a demonstration of the new engineering service should be made on letterhead by an official of his company and addressed to The Lanston Monotype Co., Dept. RW, 24th and Locust Sts., Philadelphia, Pa. There is no charge for the service.

Vacuum Removes Paper Disks-Dust

In addition to its value in general plant cleaning, heavy duty industrial vacuum equipment has been the means for providing economical solutions to a number of printing production problems. Some of these problems are removal of incompletely punched disks from business-machine manifold forms, removing dust and dirt from type cases and cleaning paper dust and particles from rotary press folders.

One case in point is the use of vacuum equipment on several offset presses by a printer of rotary business-machine manifold forms. The problem was one of removing small, incompletely punched disks of paper from the forms as they were printed and punched on the presses. Failure to remove the disks could lead to operating difficulties in the business machines as well as general untidiness around the office machine area.

A survey revealed that the forms, which vary in length to suit the customer's requirements, are punched at a surface speed of 400 f.p.m. during the printing operation. The rows of holes range from 12 to 24 in. apart. A series of tests was conducted to determine the proper size vacuum unit and vacuum tool. In the plant referred to were installed two standard Invincible model machines. The motor-driven vacuum machine is a 1½-h.p. unit with a 2 in. suction outlet.

Adjustable slides in the suction inlet of the vacuum tool provide a 3 in. wide slot to permit localizing suction at any point along the width of the form.

Capacity of the vacuum unit container is 1¾ cu. ft. For the operation mentioned the container is cleaned once a week.

The portable model can also be employed for general cleaning.

Vacuum equipment is also used in a number of newspaper pressrooms to clean up paper dust and particles accumulating at the press folders.

In one newspaper plant, a vacuum unit is used to clean two folders and balloon formers after each day's 5 hr. press run. Cleaning the folders is done daily, after the regular run. It takes about 45 min. to clean a folder on weekdays, and 1 hr. after the Sunday run.

Use of compressed air displaces dust from the folder. It also spreads the dust through the room, which may lead to a maintenance problem in the equipment. Experience with a number of installations in newspaper plants indicates that a 5 h.p. vacuum unit is suitable for cleaning folders. Circle No. 304 on Reader Service Card.

In upper picture, pressman is checking removal of incompletely punched disks from perforations in business-machine form web before rewinding. Invincible portable vacuum unit (not shown) may also be used for general plant cleaning.

In lower picture, operator is shown vacuum cleaning a newspaper press folder after 5 hr. run. Paper dust and particles, in this instance, can be removed from folder in about 45 min. A 5 h.p. vacuum unit is used.

Azoplate Moves Operations

Azoplate Corporation has transferred its operations from Summit, N. J., to new headquarters at 558 Central Ave., Murray Hill, N. J. F. W. Von Meister, Azopate president, said the entire operation will be contained in this building within the next several months. Meanwhile, some operations are being continued at the former Summit headquarters.

320,000 MAGAZINES PER DAY

Speeded Thru Mailroom

MAILROOM processing of an average of 320,000 magazines per day calls for a highly efficient organization which is equipped with machines designed for high speed operation.

This production figure has been achieved in the mailing department of Meredith Publishing Co., Des Moines, Ia., whose operations are graphically shown on these pages. Meredith, publishers of *Better Homes & Gardens* and *Successful Farming*, also produces a large volume of its own books which are shipped from another section of the mailroom to Meredith customers.

Steps in the process of sending magazines and books to their proper destination are shown in the views below and on opposite page. Finished magazines leave Meredith's machine bindery and are carried by conveyor to the mailroom. Conveyors referred to were built by Mechanical Handling Systems, Inc.

The mailroom is responsible for addressing, wrapping and sacking magazines for shipment—either for newsstand sale or individual subscribers. Newsstand

Newsstand copies are taken from conveyor, which runs from machine bindery into mailroom, and wrapped in bundles. Newsstand magazines are marked with a star on the back and shipped first at beginning of press run. Subscribers' copies are mailed geographically.

As magazines reach end of the wrapping line, Don Gilbert (right) applies label to the package. Dwayne Culp shoves bundles onto conveyor which takes them to trucks. Magazines are sent to the entry point the furthest distance first, working toward Des Moines for last mailing.

Leland Huss operates one of machines which reads name and address of subscriber from specially punched IBM cards. The machine prints labels on reel of paper. Cards are arranged geographically.

After the labels have been affixed to individual copies (front cover) they are sent on a conveyor belt to Clarence Zischler (left) and Vedar Seitz. Magazines are wrapped in small bundles for easy handling.

copies are wrapped in bundles averaging 37 lbs. each for delivery to distributors.

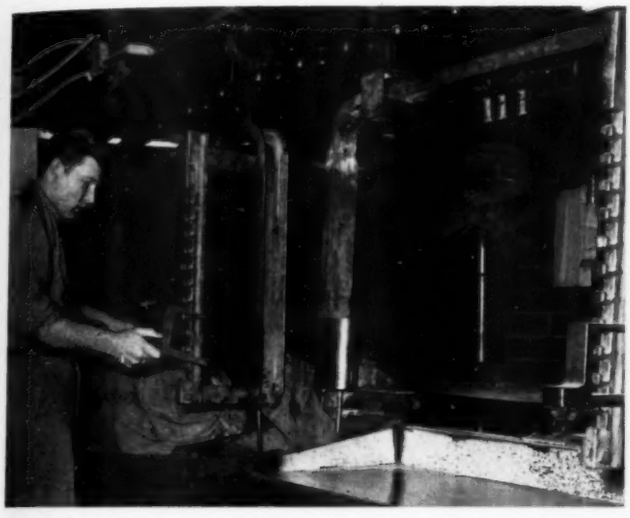
On subscribers' copies, a label, printed directly from IBM cards, is attached to the front of each individual magazine. Each label is imprinted with the subscriber's name and address on a continuous reel of paper. The reel is placed on one of the department's Cheshire addressing machines and one label at a time is cut and glued to each magazine (see front cover).

Labels are pre-sorted according to geographical location in the country (entry point, state, city and zone). They are then packaged and sacked according to individual cities and towns in small bundles. The bundles are placed on a second conveyor belt.

This conveyor carries the mail sacks to the dispatcher who determines where each bucket on the conveyor will dump its sack. The sack is then

(*Continued on Page* 98)

Bundles of the magazines—all bound for the same direction—are placed in mailing sacks for shipment. Mail sacks are placed on a conveyor by Rodney Wilson. About 100,000 sacks are used per month.



Dispatcher Glen Morris checks mail tag and adjusts lever which will trip bucket, dumping sack into proper chute. Chute carries sacks to waiting trucks or railroad boxcars for shipment to designated entry point.

In sub-basement section of mailroom, Willis Scovell (left) and Cleo Wortman wrap individual copies of *Better Homes and Gardens* books for shipment to distributors. Books are placed on conveyor at right.

Russ Lowe operates one of the Phillipsburg inserting machines which can stuff four items into an envelope at the rate of 4450 envelopes per hour. Volume mailings are handled with ease.

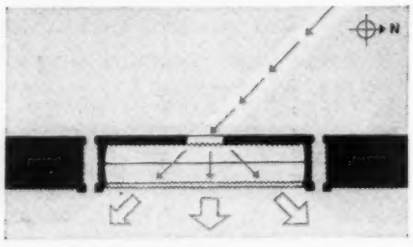
Scene of mailing operations in one corner of sub-basement section of Meredith Publishing Co.'s plant. In background bulk shipments of books are labeled and weighed for postage. Conveyors help speed moving of books.

Skylight Rejects Undesirable Light

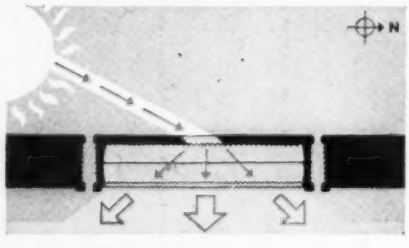
A prefabricated skylight designed to transmit only the most desirable rays of sunlight the year round has been made available for printing plants. The material, known as Toplite, was developed by the Kimble Glass Co., Sub. Owens-Illinois Glass Co. Its function is based on use of solar selecting prisms which open and close to admit cool, even light and reject the sun's hot rays.

Device is said to enable maximum uniform illumination, reduce artificial light costs, eliminate glare and reduce solar heat transmission during hot summer months. (See individual illustrations on how this is accomplished.)

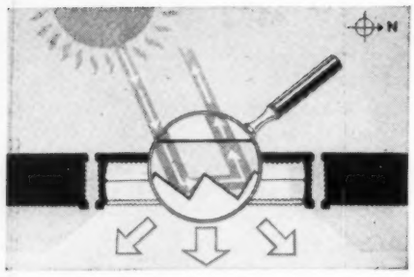
Toplite functions according to the sun's position in the sky at any time of year. Installed in relation to the north-south axis of a building, prisms of the glass units remain open on their north side to transmit daylight in all seasons. South side of the same prisms open and close according to the season, time of day and sun's position in the sky. When the sun is high in the sky, rays are bounced off the prisms as though they were striking a mirror. During hot months, sunlight is rejected and cool north light is admitted.



Transmits North Light—Maximum transmission of light from the north sky is desirable in top lighting because of its uniformity and freedom from glare and solar heat. Note how prism structure of Toplite is designed to provide efficient transmission.



Accepts Winter Sun—Since low winter sun is weak in comparison to high summer sun, maximum transmission during winter months is desirable. Diagram illustrates how light is transmitted during this time.



Rejects Summer Sun—Toplite roof panels have been designed to reflect intense sunlight during hot spring and summer months thus reducing panel brightness and total solar heat gain. At the same time, cool north light is transmitted.

Panels are available in five sizes ranging from 2 ft. by 2 ft. to 3 ft. by 6 ft. Two types are available; one is a flange type permitting installation directly on the roof deck, the other is for installation of prepared masonry, wood of metal curbs.

RESEARCH

Precoated Oak Blocking Wood—In a report to the May 1958 meeting of the Research and Engineering Council, Morris S. Kantrowitz, technical director, U. S. Government Printing Office, discussed experiments in eliminating or at least reducing warpage in printing plate blocking wood. Among the developments he discussed precoated oak blocking wood. He said that the mounting of plates on precoated wood requires exposure of the mount to a temperature of 350 deg. F. for 2 min. under the top heated platen to soften the thermoplastic resin of the precoated film. This high temperature tends to warp the mount, particularly if the mount is approx. 75 sq. in. or more in size.

Experiments were conducted with precoated oak plywood in sizes greater than 75 sq. in. The results showed a considerably less reduction in warping of the mount.

Tentative specifications for the precoated laminated oak blocking wood were prepared for the purchase of this material, as follows:

Precoated oak plywood blocking wood for electrotypers' use shall be precoated on top surface with thermoplastic resin adhesive, 0.002 in. thick, which will soften and be readily mounted at approx. 350 deg. F.

Thickness: 0.863 in. including adhesive coating; size: 19 in. by 28 in.; moisture content: Not more than 6% based on oven dry weight.

Plywood boards to consist of plane surfaces without wind or warpage, knots or other defects, and be composed of seven plies of oak wood. Both ends shall be squared evenly and sides shall be parallel. To be delivered in wax-lined corrugated cartons or fiber containers holding 20 boards each. Boards or containers to be tightly wrapped in moisture proof paper or plastic.

Research and Service Stressed—Lisle Baker, jr., President of ANPA Research Institute, Inc., announced recently that two reports were received by the board of directors dealing with the service of Research Institute to the daily newspaper business. One was an evaluation of the Laboratory at Easton, Pa., and the other was on the production engineering aspects of Research Institute.

The Laboratory Evaluation committee is: Otto A. Silha, Minneapolis (Minn.) *Star* and *Tribune*, chairman; Julian J. Eberle, Miami (Fla.) *Daily News;* W. H. James, New York (N. Y.) *Daily News;* Donald R. Newhouse, Portland (Ore.) *Oregonian;* Alex T. Primm, St. Louis (Mo.) *Post-Dispatch;* Philip S. Weld, Gloucester (Mass.) *Daily Times.*

The Production Engineering committee is: W. Howard Baldwin, Houston (Tex.) *Post*, chairman; Otis Booth, Los Angeles *Times-Mirror;* Robert Nelson, Detroit *News;* John Barron, LaSalle (Ill.) *News-Tribune.*

The board of directors of Research Institute has been studying daily newspaper needs in the research and service fields for improved production.

The board's executive committee will formulate a program that will improve the service of Research Institute.

It was emphasized in the two reports that the great need is the coordination and improvement of all of the available services in the newspaper business including greater use of information that is now available.

Precision Plates On the Way

Summarized from address by Gilbert W. Bassett, Miehle Printing Press & Mfg. Co., before IAE&S convention, Atlantic City, N. J., Sept. 1958

Over the years, there has been more precision built into the printing press itself than has been built into plates and other materials utilized by the printer. Now new types of plates are being unveiled. It seems obvious that some plate will come along that will give letterpress printers the advantages of pre-positioning and decreased makeready. If the claimed precision is built into these plates then, for the first time, the precision of printing machinery will be utilized, and in fact, may have to be increased.

Printer Should Decide on Process, Customer Not To Be Involved in Decision

TWO hundred electrotypers and stereotypers attended the annual convention of the Intl. Assoc. of Electrotypers & Stereotypers, Inc. at Haddon Hall Hotel, Atlantic City, N. J., on Sept. 8-11.

Speaking on *New Letterpress Developments,* Stanton C. Saunders, vice president of the Cottrell Company, indicated there is great strength in letterpress and that the future will show many changes in the types of letterpress equipment. Primary trend in this development, with respect to his own company, is the transition to webfed rotary letterpress units to replace flatbed and even sheetfed rotaries in such areas as publication and package label work.

Printer Should Decide

In discussing *Thoughts For The Future,* Gilbert W. Bassett, marketing manager of the Miehle Printing Press & Mfg. Co., indicated that the printer should decide on the printing process to be used and the customer should not be involved in the process decision. He noted that both (letterpress and offset) processes have a definite place in the industry and that both will continue to have a long and bright future.

Bassett explained that more research dollars were being spent by Miehle-Goss-Dexter on letterpress than on any other process. He noted that 75% of makeready time on letterpress machinery could be eliminated. In closing, he explained briefly the new Miehle medium size rotary press. His company has prepared a mockup of the press.

Plate Progress

Technical progress reports were presented on the new Electroplastic plate which is a plastic-backed conventional copper electrotype shell, by Edwin W. Miller and Carl Berger of Printing Plates Research, Inc. The speakers discussed the improved quality of the plates and reduced production costs indicating also that progress in recent months has been made in producing a good percentage of curved plates for publication and carton work.

Homer L. Bishop, Bishop-Stansell Co., also brought the duplicate platemakers up to date on the progress of his Bista plate which is also a plastic-backed conventional copper electrotype shell. The Bista plate currently is being used successfully in carton and publication work for which it was primarily designed.

Electrotype Casting

The *Electrotype Casting Seminar* conducted by the Research & Development Committee was moderated by Joseph C. Ashmead, vice president of the Neenah Electrotype Corp.

The convention *Brainstorming Session* was conducted by Floyd C. Larson, IAES secretary-treasurer, and concerned itself with labor problems, production costs, profits; new methods, products and equipment; letterpress promotion, sales volume and recession influences, self-advertising programs, and competition.

Reelected as officers were: President, Walter C. Deye, Quality Engraving & Electrotype Co., Cincinnati, O.; first vice president, Robert H. Kennedy, Detroit Electrotype Co.; second vice president, Charles H. McNellen, Bomac Electrotype Co., Toronto (Ont.) Can.; third vice president, Walter T. Flower, Flower Steel Electrotype Co., New York, N. Y.

The 1959 meeting is scheduled for September 7-10 at Hotel Biltmore, New York, N. Y. It will be held in conjunction with the Graphic Arts Exposition.

Printing Equipment Group Meets—Members of National Printing Equipment Assoc. met in Dallas last month in conjunction with PIA Convention to discuss matters of interest to the equipment field. Among these was a report on preparations for the 1959 National Graphic Arts Exposition. Officers and directors, shown seated, left to right: William Fisher, American Type Founders Co., treasurer; J. W. Coultrap, The Miehle Co., Div. of Miehle-Goss-Dexter, Inc., vice president; Martin Reed, Harris-Intertype Corp., president; James E. Bennet, NPEA secretary; John E. Eddy, Miehle-Goss-Dexter, Inc., director. Standing, all directors: Richard B. Tullis, Harris-Intertype Corp.; J. L. Auer, R. Hoe & Co., Inc.; John O. King, Ludlow Typograph Co.; George Dively, Harris-Intertype Corp.; J. Wesley Lee, Challenge Machinery Co.; Lee Augustine, Printing Machinery Co.; and William G. Young, Miller Printing Machinery Co.

Photoengravers Make Progress In Industry Research and Techniques

To Sponsor Elegant Educational Book on Use of Engravings; Powderless Copper Etching • By LOUIS FLADER

THE photoengraving industry represented by the American Photoengravers Assoc., held its annual convention, Oct. 13-15, in the Netherland Hilton Hotel, Cincinnati, O. The convention was attended by approximately 1000 persons.

For some years, the growth of offset lith and gravure, both attended by much publicity, conveyed the impression that letterpress printing and its component branches were on the way to oblivion. Letterpress printers did little or nothing to keep their process and themselves in the public eye, and sought the solution of this growing problem by going into offset, possibly on the theory "if you can't lick 'em, join 'em."

It remained for some of the letterpress suppliers to take the initial step toward the renaissance of that section of the Graphic Arts, and the American Photoengravers Assoc. three years ago made the first move in that direction.

Research is the Answer

The members of the American Photoengravers Assoc. concluded that an integrated program of research was necessary to not only keep letterpress printing in its relative positon, but to advance it. Letterpress printing has some advantages over its competitors and holds promise of tremendous progress if these were to be properly evaluated and exploited.

An attempt was made two years ago to obtain expressions from leading concerns interested in letterpress printing and the response was very encouraging. Last year a prominent public relations organization was engaged to make a survey and recommendations for an integrated research activity based on its findings. This in the form of a progress report was made at the convention.

President R. C. Walker, after calling attention to prevailing conditions said: "Our concern is with the future and in that direction we must consider: (1) Establishment of a policy to guide us in dealing with inventions and processes resulting from vast and widespread research designed to revolutionize the production of photomechanical relief printing plates, and (2) Publicize photoengraving to make the public aware of its and our existence."

C. M. Flint, Chas. T. Main, Inc., whose firm is conducting a survey leading to integrated research, made a progress report. Summary of his report will appear in PRINTING PRODUCTION for December.

Louis P. Shannon, manager, Extension Div., Public Relations Dept., E. I. du Pont de Nemours & Co., Inc., delivered an address entitled *The Value of Research to Industry*. His was an extremely informative address revealing the enormous amount of research and development conducted by his firm. He said: "You and I know that progress doesn't just happen. Progress is created by people. Progress is always created by gifted, dedicated, industrious people, but every age has had gifted people.

"Today the costly personal sacrifices of the lone wolf inventor and scientist have been almost eliminated. Many modern corporations have the economic strength to bring together whole teams of scientists, inventors and technologists, placing them in an environment of creative activity, freeing them from economic want and having at their disposal every device to help advance their project to full flower.

"I believe research is necessary to our healthy corporate life, not to say continued growth. It has been said that the only permanent thing is change. If a corporation is to have enduring life, it must meet the changing needs of the economy."

Educational Book Planned

The American Photoengravers Assoc. has planned a new book to acquaint the public with the various photoengraving processes and products, and how to order, buy and use them to best advantage. This book will be distributed by photoengravers free of cost. Clifford R. Schaible, director of advertising, Mead Corporation, spoke on the subject of the new book under the title *People Want To Know—Tell Them*. He described the photoengravers' marketing climate of today as "growth of offset lith since World War II; trend toward dually equipped printing plants; ignorance of characteristics of printing processes; many new young people; technical advancement of letterpress processes by photoengravers, electrotypers and printers; paper and ink; printing markets now—tomorrow. Competition is keen—will become more so."

He described the photoengravers' challenge of today as follows: "Sell letterpress. The selling job is big enough for all interested parties. Too big for any one segment. Educate in layman's language all interested public and high school youngsters who should consider coming into your industry, high schoolers who will be your customers in a few years."

Tri-Color Art Method

Walter S. Marx, jr., president, Printing Arts Research Laboratories, Inc., introduced a new method of

color platemaking, *No Color Re-etching or Masking with New Tri-color Art Method.* The process is an ingenious one based upon the fluorescent principle. It consists of the artist making three drawings, one each of the yellow, red and blue components of the subject with specially formulated pigments on clear acetate base.

These are photographed separately and using ultraviolet light to activate the fluorescent pigments, this results in three highlight or dropout negatives, one for each of the primary colors. The colors having been preseparated by the artist, no further masking or re-etching is required. This process can only be applied to art prepared for the purpose.

LogEtration

Glenn A. Davidson, Assistant to Technical Director, LogEtronics, Inc., spoke on *LogEtration for the Photoengraver.* This device and method combine both optics and electronics to control the brightness of a moving spotlight source during a photographic exposure.

LogEtronics brings back to the print the detail lost from the negative by putting the image on a high contrast paper and electronically dodging the image during the exposure. By use of this method, the detail in negatives and photoprints is brought out in a manner far superior to hand retouching as this is usually employed for the purpose.

Union President Speaks

The Union—a Partner in the Industry, was the subject presented by Wilfrid T. Connell, president, Intl. Photoengravers Union. He outlined the necessity of harmony and close co-operation between employers and employees in the evaluation and acceptance of new inventions and processes, all of which present serious problems to both and which must be dealt with jointly. He stated the willingness of the members of his union to co-operate in every way in this connection.

Paul Clark, president, Seidel-Farris-Clark, Inc., Toledo, O., made an address entitled: *Four I's and You.* The speaker has had wide experience in photoengraving, is a good technologist and the inventor of several devices and machines used by photoengravers. He has made an extensive study of the many applications of photoengraving possible in lines other than strictly printing. His remarks were very well received.

Officers Elected

The following were elected to serve the association for the coming year:

President, R. C. Walker, Southwestern Engraving Co., Tulsa, Okla.; 1st Vice Pres., E. B. Brooks, Wayne Colorplate Co. of Ohio, Dayton, O.; 2nd Vice Pres., D. H. Murnik, Oakland (Calif.) National Engraving & Gravure Co.; Secy.-Treas., W. K. James, Philadelphia Weeks Engraving Co.

Members of the executive committee are: Robert Birdseye, Adcraft Engravers, Inc., Detroit; Harry E. Collins, of Collins, Miller & Hutchings, Inc., Chicago; Chas. L. DeBevoise, Sterling Engraving Co., New York, N. Y.; S. Herbert Hitch, Charlotte, N. C.; Gustav Klauminzer, Arrow Engraving Co., Cleveland; Wallace J. Kletzker, Central Engraving Co., St. Louis, Mo.; Geo. J. Pfannenstiehl, Federal Engraving Co., Boston.

Darkroom Dollars

A. J. Powers, jr., vice president for research and development,

In Attendance at Photoengravers' Convention Equipment Exhibits

(All names read from left to right)

1.—Wm. M. Grolock, photoengraving superintendent, Baltimore (Md.) *Sun;* Edward J. Frey, Printing Arts Research Laboratories, Inc., Santa Barbara, Cal.

2.—R. E. Leary and Laurence Ricket, Edes Manufacturing Co.; W. R. Crosbey, executive secretary, Chicago Photoengravers Assoc.

3.—Charles L. Bronger, superintendent photoengraving, Louisville (Ky.) *Courier Journal* and *Times;* Charles E. Carlson, Ass't. Treasurer, Lexington (Ky.) Photoengraving Co.; Elwyn Dirats, Dirats Photo Plate.

4.—T. C. Malcolm, treasurer, and John Zechmeister, assembly foreman, John Royle & Sons.

5.—J. Homer Winkler, technical adviser, Battelle Institute, Columbus, O.; Gordon O. F. Johnson, LogEtronics, Inc.

6.—Charles R. Bricker, General Platemakers Supply Co.; George L. McCann, production manager, Aurora (Ill.) Engraving Co.

Some of Those Attending Photoengravers' Convention

(All names read from left to right)

1.—A. C. Mills, superintendent photoengraving, New York (N. Y.) *Times;* James J. Hart, and J. W. Feinstein, Edes Manufacturing Co.; Homer W. Alexander, president, Brown & Caldwell, photoengravers, of Los Angeles.

2.—Milton Lavers, manager, Bridgeport Engravers Supply Co.; Chesley F. Carlson, president, Chesley F. Carlson Co.; William Frisch, president, The Wright Co., Cambridge, Mass.

3.—Richard F. Olberding, secretary-treasurer, The Phototype Engraving Co., Cincinnati, O.; Robert T. Kreiman, Robertson Photomechanix, Inc.

Chemco Photoproducts Co., Inc., spoke on *Making Dollars in the Darkroom.* The speaker, a graduate of Massachusetts Institute of Technology and an experienced photoengraver, is one of the outstanding technicians in the industry. His remarks dealt solely with photographic operations, calling attention to the most recent developments in cameras and photographic materials.

Dow Etch Technical Status

The Technical Status of the Dow Etch Process was explained by John A. Easley of the Dow Chemical Co. Powderless etching on magnesium, zinc and various alloys, developed by his firm, has been one of the greatest contributions to photoengraving and has inaugurated a new era in that industry. It makes possible expansion in the use of relief printing plates for many purposes and has aroused a great deal of interest, not only in photoengraving but in letterpress printing circles.

Cost Accounting

Cost Accounting—A Service to Management was the address presented by C. A. Bostwick, director, Cost Accounting & Statistical Department, American Photoengravers Assoc. Everything the photoengraver produces is made to special order. Thus photoengraving in many respects is a delicately poised business where small details are of great importance. He dwelt upon the use of various machines in this connection which greatly simplify the compilation of cost records to make them instantly available to management.

Going into Business For Yourself

Marvin C. Rogers, Ph.D., had for his subject *So You Are Going into Business for Yourself.* He thoroughly analyzed not only the launching into business, but also its conduct. He said, "Photoengraving lends itself, partially at least, to the 'small business' idea. It can literally operate as a one-man shop business and each of you know individuals who have set out in business doing the entire job themselves. This is one of the factors that tempts men to try it. This is not the efficient or proper way to do the whole job as most of you know who have tried it. Modern business operation has many service features requiring specialized help, and every business competes with other units who have that help."

Among the visitors to the United States this summer were Mr. and Mrs. A. H. Candy of Auckland, New Zealand. They have been touring this country from coast to coast. Candy is managing director of A. H. Candy & Co., Ltd., printers' merchants. Both attended the recent Photoengravers' convention in Cincinnati, O.

"You who are in business do a poor job, I think, in telling the story of your operations and the elements of cost in staying in business. I believe that if employees generally understood the problem fully, they might offer assistance in that solution. The average engraving shops sells about $20 thousand in engravings for each journeyman and employee. The employee looks at this figure and says 'If I were my own boss, I could double my income.' It will be worth our time to examine this attitude because in discussing my own work with businessmen I find that they frequently express a similar attitude. It seems to be difficult for us to understand the nature of the service and types of businesses. Elements and pricing should be thoroughly understood.

"Leadership, ownership or management carry certain distinctions with them, but further they carry responsibilities and they require thought. Human livelihood depends on your decisions. It is no longer possible for you as a manager or owner to take out of the business what has not been put into it."

Powderless Copper Etching

Powderless Etching of Copper—What It Means To You. This was a panel presentation, the moderator being James W. Bradley, Bradley & Sons, Inc., Atlanta, Ga., and director of Photoengravers Research, Inc. The panel members were: Donald B. Alnutt, director, Graphic Arts Research, Philip A. Hunt

Co.; Wm. Guenst, jr., Master Sales & Service Corp.; Jack Meehle, assistant manager, Engraving Div., Curtis Publishing Co., and C. T. Tate, manager, photoengraving department, Eastman Kodak Co.

Bradley outlined the activities of Photoengravers Research, Inc. and reported difficulties encountered and the progress made. This process has been highly successful in the etching of halftones on copper and is making good headway in the etching of combination line and halftone plates on copper.

The process includes etching machines designed especially for that purpose, the chemicals needed to provide necessary resistance to lateral etching and undercutting, and to obtain greater depth. It also embraces a change in the character of the halftone negatives.

Like all powderless etching processes, this one depends on a delicate balance between the etching action and the protective agent. It is a process wherein the protective agent is formed as the etching proceeds and is also removed as the etching proceeds in the areas where etching is desired. The mechanical force of the etchant and its chemical affinity for the copper must be properly balanced against the tenacity of the protective coating and its chemical resistance to the etching agent.

One of the most important principles involved is that all conditions pertinent to the process must be rigidly controlled due to delicate balance of mechanical and chemical forces operating in the process. This means that paddle speed, paddle dip, temperature, additive concentration and the chemical balance of the etching solution must be the same time after time.

Electronics in Engraving

One of the most interesting and revealing addresses was made by J. A. V. Hyatt, vice president, Fairchild Graphic Equipment, Inc. Title of his address was: *A 1958 Look at Electronics in Engraving.* His company has done a great deal of research and development work in introducing electronics to the art of relief platemaking. The electronic Scan-A-Graver engraving machine is well known. The company is pioneering introduction of electronic devices in connection

Catherline (Kitty) Forkin responds graciously after presentation of substantial check by R. C. Walker, president of the American Photoengravers Assoc. Presentation occurred during the Cincinnati Photoengravers convention in October. After long service to Louis Flader, former executive secretary and to Frank Schreiber, present secretary, she will retire and devote her major attention to welfare work.

with production of negatives for use in color process platemaking, and has added an electronic scanner.

Hyatt reviewed progress made by 10 research laboratories since his 1956 report with respect to electronic color scanning. Among them he commented on the following scanners: Time-Life, Dr. Rudolph Hell, Vario - Klischograph, Hell Colorgraph, Crosfield Scanatron, English Hunter-Penrose, research progress on the Miehle development (work so far has not permitted a fully assembled piece of equipment), and the Belin Scanner. He discussed progress in his own company whereby a second color scanner in prototype form is being evaluated. The third machine, not yet completely assembled was also commented upon by Hyatt.

As reported this year in the trade press, the assets of the Acme Color Scanner designed and built by Acme Teletronix, Cleveland, were acquired by Fairchild. Two machines are now in use.

Better Copy Preparation

The Modern Equivalent of Staging and Reetching was the topic presented by Frank P. Adams, president, Kemart Corporation. He said in part: "Any amount of equipment isn't going to make anything any better than the halftone negative you start with. The key to better quality and to lower production costs lies in giving some part of your attention to the question of copy and copy preparation. If your copy is a photograph with controlled fluorescence put into the gelatin face by Kemart methods, you can then put into the hands of your halftone photographer the opportunity of making a better negative.

Indicative of the illuminating power of the new Xenon lamps, in suitable sizes, for Graphic Arts platemaking operations, photocopy machines, television and theatre, hall and street lighting, Macbeth Daylighting Corp. exhibited this giant lamp at the Photoengravers' Cincinnati convention in October.

Warren B. Reese (left) and Robert E. Meeker, both of Macbeth Daylighting, discuss the new lamp. This giant tube was made by the Osram Company of West Germany. Macbeth is exclusive distributor for the U. S. This particular lamp is known as the KQO 20 k.w. Xenon lamp. The tube is of drawn quartz, 72 in. long and approx. 2 in. diam. It is a gaseous discharge type lamp (Xenon gas). Lamp shown in illustration is intended for general indoor and outdoor illumination. It produces approx, a total of ½ million lumens of light, 500 times as much light as the ordinary 75 w. bulb. Life of the lamp shown is over 500 hours, it was announced. Other sizes for various applications will be available soon, Macbeth announced.

Consistent quality checks by one metropolitan newspaper of newsprint, ink, press rollers and blankets, rope and other sundry supplies determines

Quality Standards

By DR. GERALD LAROCQUE, *New York (N.Y.)* News*

ONE might ask to begin with, what do we mean by the term, quality control, and how does it apply to the purchase of newsprint, printing ink and the other raw materials used in newspaper printing? Quality control is a method of testing whereby raw materials are measured when received, in regard to those properties which insure satisfactory operation. I would like to briefly describe the operation of such a system at the New York (N.Y.) *Daily News*, and the benefits which can be expected to result.

The essence of quality control is to test the paper, the ink, rubber rollers, etc. in regard to those properties only which experience has shown, are capable of affecting the quality or the cost of the end result. To use a homely analogy, if we were purchasing eggs—we would check first of all, as to whether there were 12 eggs to the dozen. If we wanted a more accurate control we would then grade them for size. If we wanted to go further we would also check them for freshness by means of an egg candling test. That is quality control.

What Do We Test

There would be no point in determining whether the eggs were laid by a Rhode Island Red or a Plymouth Rock. We are only interested in those qualities which affect the end performance of the product. The first problem in quality control is, what do we test for and how do we go about it.

Let us begin with what is the most important and most expensive single item—newsprint. We are interested in three separate aspects of newsprint quality: Appearance of the printing, basic weight, and pressroom running performance. The printing quality can best be judged from the appearance of the printing itself—especially the large solid areas and the darker halftones which are the more difficult subjects to reproduce.

Differences in quality from one newsprint to another can be very pronounced, but generally speaking the variations which we encounter are less noticeable.

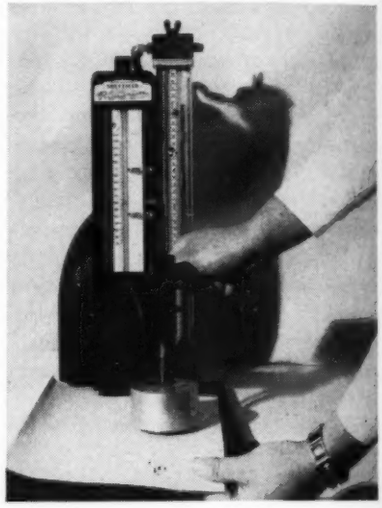
Testing Newsprint Qualities

The procedure we use is to compare the appearance of a printed signature obtained from one roll of newsprint with a signature obtained from a different roll of newsprint, where both signatures have been printed on the same press, with the same plates, impression and ink setting. The two signatures are set down side by side and examined for smoothness of printing. A notation is then made as to whether one sample looks better, the same or worse than the other.

From 20 to 50 pairs of samples are obtained from the pressroom and graded daily in this manner. The rolls may be from different paper suppliers, or they may have been received at different times from the same supplier. Using this procedure it is possible to keep a record of the comparative quality of different suppliers, and to observe changes in quality from a given source of supply.

These visual observations are supplemented by smoothness, caliper and basis weight tests which are made on the unprinted paper itself. Samples are taken from the pressroom every night for this purpose. A layer of paper (some 20 sheets thick) is cut from a discarded core. This paper is quickly rolled into a small cylinder in order to protect it from atmospheric humidity. This sample is then tested in a room which is air conditioned at about 45% R.H.

The simplest and most rapid method of measuring smoothness that I know of is with the Bendtsen instrument. Air at constant pressure is supplied to a device which rests upon the surface of the paper. This air escapes between the top surface of the sheet and two rings which lie upon the face of this device. The rougher the texture, the greater is the escape of air. The rate at which the air escapes is measured on a flow meter and gives the smoothness of the sheet.



Smoothness of newsprint is measured at New York (N.Y.) News on the Bendtsen instrument. Air is supplied to a device which rests upon surface of the paper. Air escapes between top surface of sheet and two rings which rest upon face of device. The rougher the texture, the greater is the escape of air.

Formation is another important property. A sheet is said to have a good formation when it shows a uniform milk-like structure when viewed by transmitted light. A mottled and spotty appearance indicates a poorer formation. If two sheets are equally smooth by test, the one with the better formation

*From a talk delivered at ANPA Mechanical Conference held at Hotel Morrison, Chicago, June, 1957.

will give the better printing quality.

Good printing is therefore the result of two properties: Smoothness and formation. The best news print is always characterized by good formation and a high degree of smoothness.

Basis weight measurements are also made on all shipments. The sheets are cut to size by means of a template and are weighed on a special scale.

Brightness and Opacity

At weekly intervals, or so, the paper is checked for brightness and opacity. The first test measures the whiteness of the sheet and the second measures its tendency to show-through. The procedures used are based upon those followed in the paper industry.

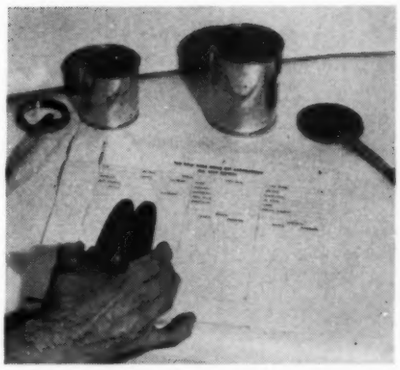
All of these tests are performed in a fairly dry atmosphere—namely at 45% R.H., or thereabouts—and special precautions are taken, while sampling, in order to protect the paper from atmospheric humidity. Unless these precautions are taken, erroneous basis weight and smoothness values may be obtained.

The tests which I have described are those which determine the appearance of the printed newspaper. In regard to the paper's pressroom running performance we keep a daily record of the number of breaks and the number of rolls used—by supplier and by month of manufacture. This information is sent to the mills every week.

The running performance of certain shipments can sometimes be traced to the weakness of the sheet. The tearing strength of the sample (as measured across the web) is a good test for this purpose. This is not always the case, however, because the paper may run poorly because of flat rolls, poorly made splices or other localized defects.

Testing of Printing Inks

We use a series of tests for controlling the quality of our printing inks—newsblack, comic colors and rotogravure. Shipments are checked about once a week for shade, color strength and viscosity. This is done by comparing the current shipment with a standard reference sample which is renewed once a year.



Checking differences in the shade of news inks at New York (N.Y.) *News* by means of the draw-down test. A pre-printed form is used which includes information about shade, strength, dispersion, yield value, viscosity, penetration, oil stain, etc. Draw-downs are made from a sampling of the ink and appear alongside a draw-down of the standard for the ink. Visual comparison is then possible.

The shade of the ink, both black and colored, is checked by drawing-down a sample of the current shipment against the reference sample using a wide flat putty knife for this purpose. Any slight difference in shade can be observed. If the difference appears to be excessive it is brought to the supplier's attention.

The strength of the ink is important from the standpoint of cost and pressroom mileage. A small amount of the current shipment is weighed out and mixed or bleached with 20 times its weight of a special white paste. An equal amount of the standard ink is likewise reduced with white paste. Any difference in color strength can be seen by comparing these two bleaches. Should there be a difference, additional white paste is weighed out and added to the stronger sample until they are both alike. The relative strength of the two inks can then be calculated from the known weights of added white.

In the case of gravure inks, the bleaching is carried out with a special varnish consisting of zinc resinate and isopropyl acetate in equal parts. A falling off in strength of 10% or over on a particular shipment is brought to the supplier's attention. A variation of ±5% is considered normal.

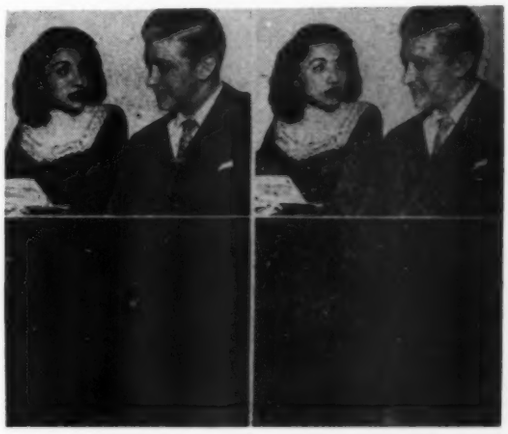
We also measure the viscosity or flow characteristics of the ink since this can affect the appearance of the printing. Generally speaking an ink which is too heavy will not cover properly and will give more offset on the first impression pages. An ink which is too thin will give excessive strike-through and misting. There may also be trapping difficulties in multicolor printing unless the ink first laid down is of higher viscosity than those which follow.

Measuring Viscosity

We measure the viscosity of the inks with a simple device of our own design.

A measured drop of printing ink is placed upon an inclined plane by means of a syringe. A steel roller is released and the ink is spread into an elliptical area. If the ink is thin a large ellipse will be obtained. If the ink is thick the area is smaller. The size of this ellipse provides a measure of the ink's viscosity. This method has been selected because the flow of ink takes place under conditions which are similar to those existing on the printing press. A variation of a ±20% from the standard is considered acceptable for black and comic inks.

In the case of gravure inks, which dry very rapidly, a Brook-



Difference in quality obtained at New York (N.Y.) *News* on a smooth and rough sheet of newsprint. The quality of sheet at left is considered good; quality of sheet at right is poor. Comparisons must be made from signatures printed on the same press, with the same plates, impression and ink setting.

field viscosimeter is used. Inks are also tested occasionally for coarse particles using for the purpose a Grindometer gauge.

This control of ink quality has been operating for a number of years with good results. Although we buy nine different kinds of ink from five different suppliers, shipments are remarkably uniform in quality. During a typical year we will test from 200 to 300 samples of ink. Of this number only four or five may be deficient in regard to viscosity or color strength.

Miscellaneous Supplies Checking

The same type of control—although on a smaller scale—is used when purchasing rubber press rollers, press blankets, rope, wrapping paper and other sundry supplies which, in our case, amount to some $400 thousand a year.

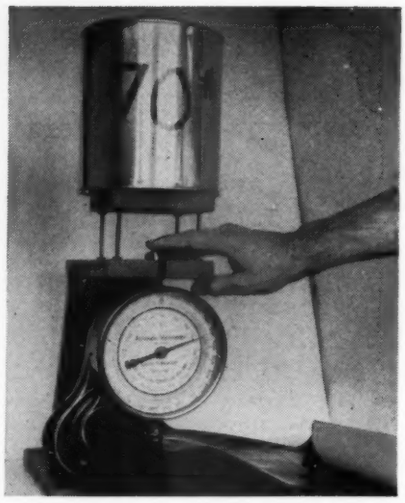
The same principles apply as before. The first step is to decide what property or properties are important to the user. The second step is to locate a test which will measure that property. These tests are then used (a) to compare the merit of competitive products which are being offered to our purchasing department, and (b) to check deliveries in order to insure that the material delivered meets the purchase specifications.

In the case of rubber press rollers, these are checked for hardness with a Type A Shore Durometer and for fire resistance. According to the procedure, which we have developed, a small gas flame, 1 in. in length, is played upon a portion of the roller for 60 sec. After removal of the flame, our specifications require that the burning rubber should extinguish itself in 5 sec. or less.

Press blankets are checked for compressibility using a modification of the Schopper paper micrometer of our design. For satisfactory operation we find that the blanket combination which we use should compress by 10% when a 70 lb. load is applied to a circular area measuring $\frac{5}{8}$ in. diameter.

The rope used in our circulation department is a considerable item of expense. We check the weight per running foot since it is purchased by the pound. We also check the tensile strength.

The wrapping wrapper used by our mailing department is also bought by the pound. Periodic checks are therefore made of the number of sheets per pound and of the tearing strength.



Press blankets are checked for compressability using a modification of the Schopper paper micrometer. At the New York (N.Y.) *News*, the blanket combination should compress by 10% when a 70 lb. load is applied to a circular area measuring $\frac{5}{8}$ in. in diameter. Other supplies are checked for established standards.

Nitric acid and perchloride of iron are two other significant items of expense. The strength of these etching materials can be readily determined either by titration or the Baume test.

This is briefly the manner in which quality control operates at the *News*. The advantages to be gained from such a procedure are three-fold and can be summarized as follows:

(1) Quality control helps the operating foreman because it assures him that his department will receive raw materials of uniform quality. In the event a shipment does not meet the required standard (which sometimes occurs) he will furthermore have been forewarned and will be able to use the material with a minimum disruption to his department.

(2) Quality control helps the supplier because it keeps him better informed on the performance of his product. Deficiencies can be corrected more quickly and more easily. Rejected shipments are kept to a minimum.

(3) Quality control is desirable from the standpoint of management because a regular check on quality reduces the amount of waste, insures a smoother operation throughout the plant and provides an accurate basis for comparing competitive products.

In the case of the *News*—which consumes every year about 250,000 T. of newsprint, 11,000,000 lbs. of ink, and other raw materials—this program requires the services of four technicians. When smaller quantities of raw materials are used, I have no doubt that an adequate control could be set up with as little as a single employee.

Illinois Conference is Well Attended

The Illinois Newspaper Mechanical Conference elected as its president for the coming year Frank A. Green of the Peoria (Ill.) *Journal-Star*. About 350 production and mechanical executives attended. The conference was held at Hotel Orlando in Decatur, Sept. 13-14.

Green succeeds Sidney J. Scott, composing room superintendent of the Decator (Ill.) *Herald* and *Review*. Scott presided during the two day sessions devoted to production and mechanical problems.

Arthur Kramer, Joliet (Ill.) *Herald-News*, was reelected secretary-treasurer.

Fred W. Schaub, executive vice president of Lindsay-Schaub Newspapers, welcomed those attending.

Elected to the board of directors (all Illinois executives) were: John Rausch, Aurora *Beacon-News;* Earl E. Anderson, Winnebago Newspapers, Rockford; Vernard Bradley, Kankakee *Daily Journal;* James Rickard, Danville *Commercial News;* Sidney J. Scott, immediate past president; Les M. Phares, Champaign *News-Gazette,* and Joseph Burge, Dixon Publishing Co.

Six of the eight living charter members of the Illinois conference which was organized 30 years ago, attended. These were Fred E. Wing, Russell B. Miller, Thos. F. Grady, Harold Whitaker, George Cast and Ralph M. Moore.

Lawson Cutter for Mallon—First of the 69 in. Lawson Pacemaker cutters to be installed in the New York area is now in operation at Peter F. Mallon Inc., Long Island City, N. Y. Shown demonstrating the machine to bindery foreman Joseph Corcoran is cutter operator Harry Beckerman.

Cullom & Ghertner Expands

An expansion of its Carb-O-Copy service, making possible production of a greater variety of hot wax carbonized business forms, has been announced by Cullom & Ghertner Co., business form printers, Nashville, Tenn. In the Carb-O-Copy process, the wax carbon compound is impregnated on the back of the original business form sheet and is transferred directly to the underlying duplicate copy sheets during the writing or typing operation.

The company also has undertaken production of marginal punched continuous forms. C&G's forms will be produced in depths of 11 in., 8½ in., 71/3 in., 44/10 in. and 32/3 in. These will fit typewriters, teleprinters, tabulators and business machines.

Firm Wants Equipment For Export from USA

The British firm of General Trade Equipment Limited, 82-90 Seymour Place, London W-1, England, states it is now free to accept agencies or to deal simply as merchants for American made equipment. We are told by Director L. G. Leanse of the company, that the British economy is flourishing and there is a substantial demand for American products which for nearly 20 years have not been allowed in England. General Trade publishes a monthly catalog in sections up to 64 pages each. Correspondence from American manufacturers is invited. Equipment makers may address Leanse at the address given above.

Oxford to Spend $15 Million

Oxford Paper Co. will invest $15 million in major additions and improvements to its Rumford, Me., mill during the next three years, reports William H. Chisholm, president. The three-year construction program will include: A new softwood kraft mill with a capacity of 175 T. of pulp a day; a new chemical recovery plant with a capacity of 300 T. a day; a new chlorine dioxide bleaching system; and additions to the hardwood kraft mill to increase production from 250 T. to 350 T. a day.

Harris-Intertype Report

Harris - Intertype Corporation's shipments for fiscal year ended June 30, 1958 total $57,913,766 compared to $59,078,826 in the previous year, it was announced in the company's annual report. Net earnings were $2,961,984 compared with $4,733,-045 last year. According to George S. Dively, chairman and president, the outlook for the year ahead is encouraging.

Carnegie Tech Seminar Plans

Program Chairman John L. Kronenberg has announced April 16-18, as dates for the Carnegie Printer Alumni Seminar and Management Conference. Emphasis of the Seminar will be on the medium-size plant because a survey of Carnegie Tech alumni showed considerable interest in this size printing operation.

LETTERS TO THE EDITORS

Mistaken Credit

The Pacific Newspaper Mechanical Conference in San Francisco established a record in attendance. I am certain that your report in the October issue has been followed with a great deal of interest by newspaper personnel throughout the industry.

PHILLIPS

However, it was exceedingly disappointing to note that my address delivered at that conference entitled *Compares Photoset with Hot Type,* was credited to another person. I will appreciate a correction. And I might add: Please *do not* cancel my subscription.

John T. Phillips
Asst. Production Mgr. and
Acting Supt. Composing Dept.
San Diego (Calif.)
Union-Tribune.

(Editor's Note—PRINTING PRODUCTION regrets the error in crediting Phillips' address on an extremely live subject to another. We *did not* cancel his subscription.)

MECHANICAL COMMITTEE APPOINTMENTS MADE

President D. Tennant Bryan of the American Newspaper Publishers Assoc. has announced appointments of ANPA Mechanical Committee members. These are as follows:

Chairman: Geo. F. Marshall, Prod. Mgr., Portland (Me.) *Press Herald* and *Express.*

Vice Chairman: W. R. Coddington, Mech. Supt., Chicago *News.*
John Barron, Prod. Mgr., LaSalle (Ill.) *News-Tribune.*
Randall Barton, Prod. Mgr., Phoenix (Ariz.) *Republic* and *Gazette.*
James S. Copley, publisher, San Diego (Calif.) *Union* and *Tribune.*
J. J. Eberle, Prod. Mgr., Miami (Fla.) *News.*
David K. Gottlieb, Bus. Mgr., Davenport (Ia.) *Democrat* and *Times.*
James Harrison, Prod. Mgr., Toronto (Ont., Can.) *Globe* and *Mail.*
George W. Helm, Jr., Westchester County Publishers, White Plains, N. Y.
Harold Hoots, Prod. Mgr., Decatur (Ill.) *Herald* and *Review.*
George Kunz, Prod. Mgr., South Bend (Ind.) *Tribune.*
J. Harold Mintun, Prod. Mgr., Pittsburgh (Pa.) *Press.*
Theodore Newhouse, Bus. Mgr., Jamaica (N. Y.) *Long Island Press.*
A. E. Rosene, Prod. Mgr., St. Paul (Minn.) *Pioneer Press* and *Dispatch.*
Harry Sloan, Prod. Mgr., New York (N. Y.) *Mirror.*
W. W. Southam, Vice Pres., Southam Newspapers, Ltd., Toronto (Ont., Can.).
James L. Stott, Vice Pres., Richmond (Va.) *News Leader* and *Times-Dispatch.*
Donald V. Weber, Prod. Mgr., Houston (Tex.) *Chronicle.*

Executives: In case you don't know

Here's How to Make Ulcer-free Decisions

By ERNEST W. FAIR

YOUR job tough? You should have mine!"

Such comment from the man who works with his muscles directed toward the business and/or plant executive is certain to be made frequently somewhere in this land. It's the world's number one misconception as every printing executive well knows.

The management job which is primarily one of day-in and day-out decision making has no equal. Swinging a hammer or a wrench is easy in comparison. Few men who work with their muscles are ever troubled by sleepless nights, jagged nerves or ulcers—the common identifying badges of the man who works in an executive job.

Yet decision making need not be a task of mental turmoil and nervous jitters. It can never be an easy, routine job no matter how we perfect our techniques for it is basically a task of handling an entirely different and unique problem every time. But it is definitely possible to be free of executive ulcers or trips to the psychiatrist by learning how to simplify our decision making chores.

We've asked a number of executives how they achieve this desirable end. From their suggestions here are a number of procedures any executive can use to set up decision making as simpler, surer and less exacting.

Learn to compromise on decisions.

Select the best features of each alternative involved. When we seek to drive ahead on a fixed course doubts and difficulties always confront us. We can never be sure we have made the right choice. We can always be certain we have made a better choice when we select the good features from each alternative and blend them into the final decision.

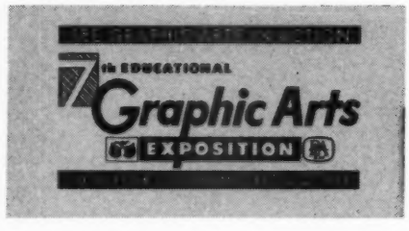
It's the uncertainties which plague us when both sides of the problem consist of valuable assets and we have difficulty choosing for that reason. Even after the decision has been made doubt will come back if we leave out assets of the rejected course and these latter doubts not only bring on those ulcers but make it more and more difficult to formulate subsequent decisions in our work.

Don't put it off.

That always leads to trouble, makes the final decision more difficult to reach and invariably leads to physical troubles on your part. Whenever one procrastinates one courts disaster. We cannot, of course, rule out delay altogether, for failure to employ a little procrastination brings about snap decisions. It pays to delay just enough to be sure—no more.

Take the time to gather the facts.

This reduces not only the possibility of error but the toll of never being certain afterwards that the right decision has been made. Facts are our most powerful assist in making decisions but we must learn to be sure of these facts. That takes a little time—careful checking and analysis. No details involved in the individual problem to be solved should ever be taken for granted or should we ever assume that they exist. This leads to those "after decision" problems which are always sure ulcer creators.



Consult and check.

It's a sure way to easier decision making. None of us possess the mental facilities to make a perfect decision every time; we need advice and assistance from others. The more we use the thinking power of other individuals the greater becomes the value of our own executive ability.

When you've made the decision final—forget it.

Mulling over the question as to whether or not we choose the right course every time we make a decision does nothing toward keeping our ulcers quiet. We may be able to retrace steps in a few isolated instances but these are the exceptions and invariably our decision, good or bad, must stand.

Keep a relaxed frame of mind.

It's time proven and tested that executive decisions made from a relaxed frame of mind are apt to be the sound ones we constantly seek. most of us find that it pays to defer any decision making until such times as we have this relaxed frame of mind—that the decisions made at other times have invariably been

the ones which brought us the greatest headaches. Sometimes this requires a delay of but a few moments, even an hour, and should not, of course, be confused with procrastination.

Don't try to anticipate all eventualities.

We have to leave some things to chance. The more factors we drag into decision making the greater will be the possibility of creating mental and physical turmoil in the process. Good decision making calls for some anticipation of end results but the man who tries to foresee every tiny and remote possibility only burdens his thinking processes unnecessarily.

Cultivate decisiveness.

Without it we are lost in making any decision. This is the feeling we have that surrounds the process of making a decision on any matter, large or small, connected with our job of being a good printing plant executive. When the ability to be decisive is lacking tension mounts within us and our problem becomes much more difficult. Even the best of us have those moments during any given business day. They are times in which we have no call to be making decisions.

Know the decision making processes.

Study them and keep studying them for one can never learn all there is to know about being a good businessman. We can always hold down the strain of this ever-present executive task by having a better understanding of what a decision is and by learning how to failure proof our decisions. Following a program of constantly seeking the better ways of handling those two important factors has been found to be a sure method of holding down strain in decision making by most top flight business executives.

Eliminate the fear of failure.

It's a number one cause of physical and mental strain on executive jobs and leads to nothing but disaster in the long run. No good decision can ever be made when this cloud hangs over one's head. It is, of course, a mental attitude and has to be handled properly just as any other problem of our job is handled. We can be certain not only that good business decisions are never made under fear of failure but that it is a sure path to physical and mental breakdown when we fail to conquer it at the very start.

Installs Four Color Offset—Butterick Company, Inc., Altoona, Pa., is printing 10 colors once through the press on its new Miehle No. 61 four color offset. This is achieved by splitting the fountains on the first two units for four colors each. Shown with the press are, from left to right, William Hughes, and J. Kelly, both of Butterick, and Henry S. Hamilton, sales representative, Miehle Company, Div. Miehle-Goss-Dexter, Inc.

Purpose and fairness must be present.

They are always necessary to ulcer-free decision making. These, coupled with evaluation of data properly, are absolute musts to obtain good balance in handling any business problem. When all are used decision making becomes a smoother and surer process.

See both sides of the question before you make the decision.

That makes certain such stands we have taken do not come back to "haunt" us in the future. The man who carries a number of such "haunts" on his back each time a new decision is to be made is a sure candidate for long confinement in a rest home somewheres.

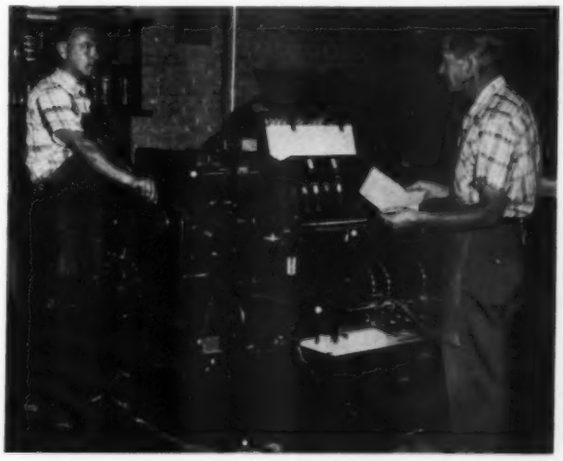
Keep snap decision making out of your routine.

The cases where the individual is forced to make a snap decision are few and far between. Almost invariably those are the ones which bring him great grief in the long run. Successful executives have told us time and again it is wise procedure to keep such snap decision making to an absolute minimum.

New Letterpress Plate Exhibit

It has been announced by Exec. Secy. Floyd C. Larson, of the Intl. Assoc. of Electrotypers & Stereotypers, 758 Leader Bldg., Cleveland 14, O., that a new Letterpress Plate Exhibit is being prepared. Working with the association is Managing Director Robt. E. Rossell, Research and Engineering Council.

The current exhibit which has been shown before many industry meetings, has become in need of complete re-organization. It has been announced that the new exhibit probably will not be ready before Dec. 1 this year.



Installs Heidelberg Press—Automatic Printing Co., Torrance, Calif., has installed a 15 in. by 20½ in. Original Heidelberg automatic cylinder press. The firm specializes in production of snap-out work. Pictured are (left to right) Elwood Anderson and Earl Morley.

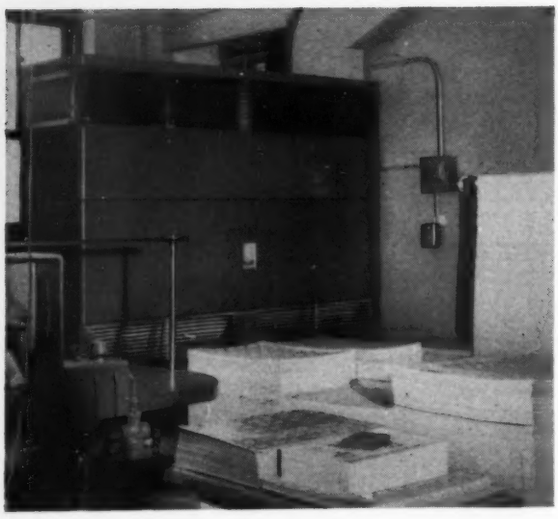


Fig. 1—Front view of 10 T. Carrier Self-contained Weathermaker Air Conditioning Unit in plant of Grove Printing Co., Waco, Tex.

(Photos courtesy Carrier Corp.)

Texas Commercial Print Shop Finds Air Conditioning Provides Savings

IT has been found by O. T. Grove, head of the Grove Printing Co., Waco, Tex., after about three and a half years of experience with air conditioning, that it has resulted in tangible savings. He says: "Air conditioning eliminates paper curling, stock maintains its texture, size and weight, and smearing of ink by the rollers is impossible due to the maintenance of constant temperature thereby reducing production costs and improving quality."

Another saving is in the cost of press rollers. As rollers are very sensitive to temperature changes, non-air conditioned shops find that at least two sets of rollers per machine are required, one for summer and one for winter.

Hot summer temperatures plus the speed of presses make a roller of greater hardness necessary. Even then there is danger of run down rollers damaging the presses due to extreme heat conditions in a non-air conditioned shop. Grove estimates that total replacement cost of rollers for his printing equipment before air conditioning was $300 yearly. Since air conditioning one set of rollers can be used the year 'round.

Avoid Costly Breakdowns

"Air conditioning is insurance against costly breakdowns of press equipment," Grove stated. "If a roller should run down it could ruin plates and parts of the machine itself. In a non-air conditioned shop it is not uncommon during oppressively hot summers and intensive use of the equipment to change roller sets three or four times within four to five months."

This shop was moved in 1931 to occupy the ground floor of a small multi-story building with overall dimensions of approximately 26 ft. by 75 ft. It is made of steel reinforced concrete walls with brick veneer and a ceiling height of 18 ft. The structure faces northwest and most of the front consists of a 16 ft. by 18 ft. glass window. A service counter and several desks comprise the business office. There are no partitions but a row of filing cabinets separates the administrative area from the mechanical department. Equipment for both letterpress and offset printing is operated.

As the volume of business increased it became evident that air conditioning was needed for three primary reasons: To improve the quality of work, reduce production costs and to provide efficient working conditions for the employees.

The Grove Printing Co. is typical of small printing plants across the country but it is located in a climate where excess of temperature and humidity are more of a problem than in more northern climates. The building is not insulated, but with the aid of air conditioning the company had a sales volume of $80 thousand last year.

Other Benefits

Air conditioning provides for a happier, more comfortable and more productive shop. Quality of output, where costly and damaging smudges on finished stock are eliminated, is also greatly improved, and the era of perspiring workers ended with the turning-on of the system maintaining control of the interior atmosphere. Grove considers the benefits due to air conditioning as a problem area overlooked by many owners of both large and small printing establishments and, in addition to the other advantages, he estimates that it saves one hour of production time per day formerly spent by workers cleaning their hands prior to handling and inspecting printed stock.

Year 'round Weather

This is the first printing plant in Waco to be air conditioned. A temperature of 80 deg. F. and 60% relative humidity is now maintained the year 'round by a Carrier self-contained Weathermaker with a cooling capacity of 10 T. This type of unit was selected because it meets the needs of a small shop, is easily installed, called for no alterations in the interior of the building, and occupies a minimum of floor space. It is located at the rear of the shop as shown in Fig. 1.

A packaged cooling tower (Fig. 2) is located on a loading dock on the opposite side of the wall from the Weathermaker. The two units are connected by a 6 ft. pipe.

If the business is moved at any time to another site this air conditioning equipment can be moved with it and used at the new location.

The heat load, considered normal for this type of operation but excessive for quality printing and efficient workmanship, is fully absorbed by the Weathermaker unit. It is interesting to note that this heat load consists of the customary heat provided by people and lights, heat from the motors, three presses with gas burners for drying ink, a Linotype machine, a northwest ex-

posure of glass, plus heat due to a lack of insulation of the walls of the building.

When making bids on this job Jacobs-Cathey Company, the Carrier dealer in Waco, included treatment of the air space between the high ceiling and working area by circulating cool air throughout this space. This was not done by other bidders who figured 20% less cooling capacity and therefore reduced tonnage and cost. However, maintenance of comfortable working conditions around the machinery, one of the main objectives of the job, necessitated that this space be considered, in Grove's opinion, and he feels that the results have fully justified his decision.

Equipment Details

The slightly larger capacity Carrier unit also offered greater versatility. As it contains two compressors of 5 h.p. each they do not need to be operated at full capacity at all times, resulting in lower operating costs. They can also be operated independently of each other so that if one of them should develop trouble the other can provide air conditioning. In addition, individual operation of the twin compressors permits economical operation during intermediate seasons when full capacity cooling is not required.

A duct from the Weathermaker serves an 18 ft. by 30 ft. paper storage and supply room. By keeping the paper stock under the same atmospheric conditions as those in the printing shop it is not necessary to condition the paper before using it. This saves time and trouble and probably inadvertent errors. Maximum utilization of space, so important in a small shop, is also promoted by this because the paper can be used as soon as it comes from the storage area.

As pointed out by the Carrier dealer, evaporative cooling is not recommended for printing plants as the humidity cannot be controlled accurately by this method. Glycerine, a part of composition press rollers, has an affinity for moisture and wet rollers will not pick up ink.

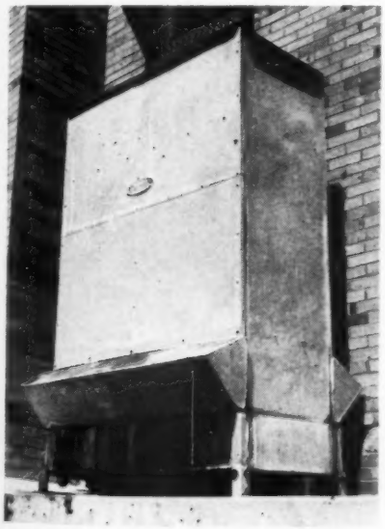


Fig. 2—Cooling tower outside of building on the loading dock, Grove Printing Co., Waco, Tex.

Bindery Equipment in the Planning

PROPER planning and good binery equipment both are required for optimum success in the printing business according to two recent spokesmen for Dexter Company, Div. of Miehle-Gross-Dexter Inc. They were Arthur E. Peckman, vice president, and Peter deFlorez, head of the firm's design affiliate.

Peckman, speaking before a meeting of the Des Moines (Ia.) Craftsmen's Club, said: "When the printing salesman sends a job to the estimating department, the bindery should be the first department to be consulted. Most bindery superintendents can tell the estimator which way the job will run best."

DeFlorez prophesied at an American Institute of Graphic Arts meeting in New York City that the Graphic Arts industry "can look ahead to a considerable rate of machine development and increasing bindery automation during the next few years."

Recent Dexter Developments

Both men cited recent Dexter equipment developments designed to help make the bindery a more profitable department.

These included the Dexter 52 in. by 76 in. blade and buckle folder which will fold up to full size sheets printed on 52 in. by 76 in. offset or rotary presses. It is capable of running at speeds up to 4500 sheets per hr. steadily.

The Model 300 high speed arm gatherer is designed to gather single sheets or signatures at speeds up to 135 sets per min. The machine can be furnished "with practically any number of feeding stations," said Peckman, and can be used as a gatherer only, or in combinations with a stitcher or a conveyor for greater speed in-line production.

The Dexter casemaker for the book field was described. It makes cases from 6½ in. by 8½ in. min. to 12¾ in. by 19½ in. max. at speeds up to 3500 per hour. DeFlorez said the present model high speed sheetfed case maker is being revised so that it can be fitted with attachments to permit manufacturing of three-piece cases in a single pass through the machine.

New Machines Ahead

Two new buidling-in machines are expected to be announced within the next few months, one of which will operate at approx. 1000 and the other at 2000 per hr. Major advantage of these machines is said to be the fact that a book will be held in its clamp for the duration of the building-in period, without being disturbed by transfer from station to station.

Also mentioned were the McCain automatic mailing machines for applying labels to magazines at speeds up to 25,000 per hour; the McCain trimmer for attachment to automatic covering machines, which automatically trims the three sides of side stitched and covered magazines as they are delivered from the covering machines; and the Lawson hydraulic clamp electronic spacer cutter in 60 in., 66 in. and 69 in. widths.

Peckman concluded: "We are now testing a single knife trimmer to automatically trim the fronts of booklets run in gangs on our Christensen heavy duty stitchers. This machine has a size range from 3 in. to 12 in. for the width and from 18 in. to 39 in. for length, and a shear capacity of up to ⅜ in. thickness."

Isolating Vibration from Printing Plant Machinery

Uncontrolled vibration can damage machine, building structure and quality of production. Here are tips on how to stop it.

THAT it is frequently desirable, if not essential, to take steps to isolate the vibration of printing machinery is well known. How it can be done is probably not so well understood. The need is accentuated by the fact that many printing establishments, even of considerable size, are located on one or two floors of a building occupied by other tenants who are greatly disturbed by excessive vibrations.

Uncontrolled vibration is likely to be damaging to the machinery itself, to the building structure and to the quality of production, whether the printer uses the whole building or only a part of it. In general, it may be said that each instance of vibration isolation calls for individual engineering consideration as there are practically always local conditions that must be taken into account. There are, too, various ways of isolating vibration such as the use of resilient pads like those made by the Felters Company or the Fabreeka Products Co., the Korfund steel spring isolators and Elasto-Rib pads, the B. F. Goodrich rubber Vibro-insulators, and others.

The objective of all of these is to absorb vibration and to prevent its being transmitted to other machines and to the building itself. Modern presses of very large size are now often set on special bases separated from the rest of the building. Dependence is not placed on isolating devices to prevent transmission of vibrations.

A great deal of attention is being given to this subject. Some examples of how a number of vibration problems have been handled successfully will give a good idea of what can be accomplished. When it comes to coping with a specific situation it is usually best for the printer to seek the advice, which may be had for the asking, of one or more of the reliable makers of vibration isolating materials or devices.

Stopping Vibration in Existing Building

An interesting example of the solution of a vibration problem is to be found at the plant of the Brooklyn Letter Service, Brooklyn, N. Y., when it moved to the third floor of a building. In its old location the noise and vibration from its machinery was transmitted to the floor below to such an extent that the landlord was worried about the effect on his other tenants. To be assured that the same conditions would not be repeated in the new location the printer called in the engineers of a manufacturer of vibration controlling equipment to make recommendations regarding a Kelley 17 in. by 22 in. press, two Kluege presses, a Miehle Vertical press, a Webendorfer press and a Craftsman paper cutter.

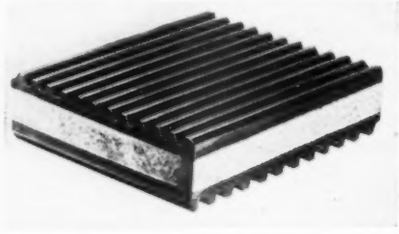


Fig. 1—Section of Korfund Elasto-Rib vibration material.

A material consisting of a ½ in. thick composition cork bonded on each side with ¼ in. thick Neoprene, known as Elasto-Rib, was recommended for all of the above. Its construction is shown in Fig. 1. The Kelley press was mounted on eight pieces or pads of Elasto-Rib, 5 in. by 5 in. size. The legs of the delivery table were also mounted on similar pads to prevent transmission of vibration from the press to which it is mechanically connected. When the job was completed and with all of the equipment in operation none of the machines could be heard or felt.

Bindery Vibration Problems

William Norwitz Co., book and pamphlet binders, paper rulers and machine folders, Washington, D. C., had a somewhat similar experience. This concern moved to the second floor of a newly completed building which it owned, with the intention of renting the first floor and basement. After all of the folding machines, paper cutters, stapling machines and other equipment were installed and running it was found that the vibration was objectionable. The noise was transmitted to the first floor and even down to the basement.

It was realized that under such

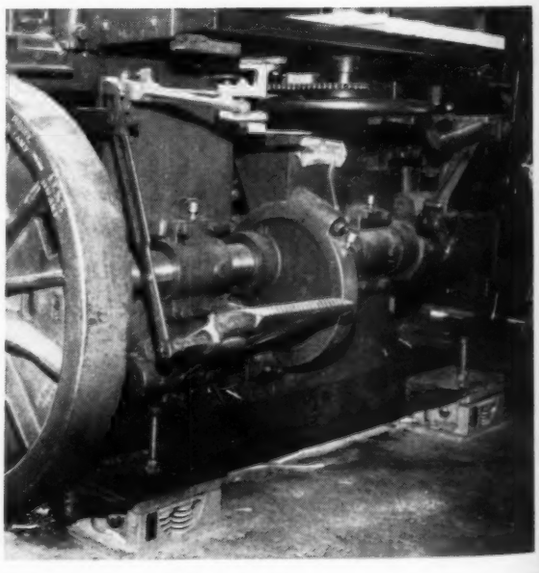


Fig. 2—Paper cutting machine with cradles which rest on steel spring Vibro-isolators at each corner.

ANOTHER NOLAN CUSTOM-BUILT INSTALLATION

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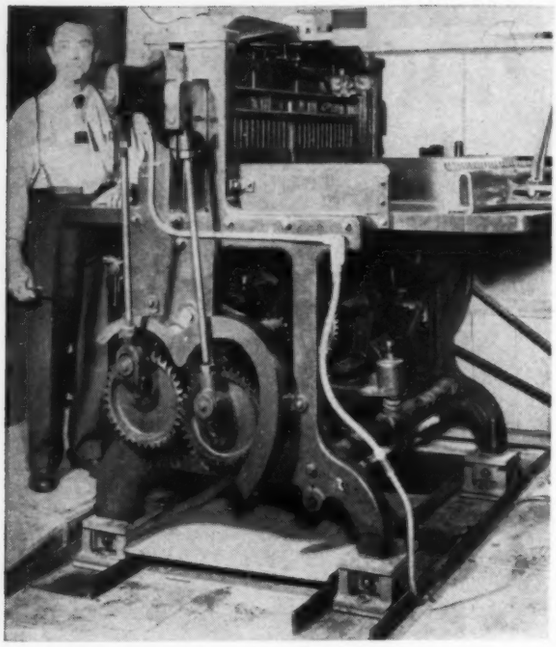

Fig. 3—Sheridan die cutting machine mounted on steel spring Vibro-Isolators and Elasto-Rib pads.

circumstances it would be impossible to rent the store or basement and the space was temporarily taken off the market. In the meantime an effort was made to correct the difficulty. This was accomplished by installing steel spring Vibro-isolators under some of the machines which eliminated about 95% of the vibration. The store was rented to a florist within a month.

The paper cutters, it was determined, were causing much of the vibration while the main noise offenders were the folding machines. Steel spring Vibro-isolators could control the vibration of the cutters, but placing them under the machines would raise them 4 in. This meant an inconvenient working height for the operator who has to lift heavy stacks of paper to the cutting table. To remedy this, angle iron cradles were designed which were welded to the sides of the frame and rest on the Vibro-isolators at each corner as seen in Fig. 2. The cradle is raised just enough to be out of contact with the floor by screwing down the adjusting bolts of the isolators, thus preventing the transmission of vibrations to the floor with the cutter raised less than 1 in.

The work done by the folding machines is less heavy in character but it was still imperative that their noise be reduced. It was not necessary to use the relatively expensive steel spring Vibro-isolators. Instead, the vibration control manufacturer recommended his less expensive Elasto-Rib pad dampers. The excellent results obtained proved them to be a satisfactory answer. To make the most effective use of these dampers, cradles of welded steel were made to fit these machines. The entire cradle is isolated from the floor by the dampers underneath.

Isolating Die Cutter

Another interesting and successful job of isolating vibration was done at the Keuffel & Esser Co. plant in Los Angeles. In this case the vibration caused by a Sheridan die cutter each time it made a cut could be felt and heard over the entire four story building. To overcome this difficulty, channel irons were used, as shown in Fig. 3, to distribute the weight of the machine over a greater area due to the weakness of the floor. Steel spring Vibro-isolators were placed under the four legs and Elasto-Rib pads under each Vibro-isolator, two legs being set in each channel. Isolator chocks were used to resist the pull of the belt from the drive motor.

With this arrangement no shock is transmitted to the floor by the knife cutting the paper. It is now possible to stand next to the machine under normal running and cutting conditions, without feeling any vibration when the paper is cut.

As the vibration isolating equipment raised the cutting machine considerably above the most convenient height for the operator a wooden platform was made for him to stand on. The platform comes up just about to the level of the feet of the machine, which is the normal height when not mounted on isolators.

It is worthy of note that in each of the three examples which have been considered the remedy has been different, but effective. In other words, it is necessary to consider each case of isolating vibration as an individual problem. As this calls for specialized knowledge and experience, it is the part of wisdom to call on a reliable and duly qualified maker of this type of equipment for advice.

Vibration Isolation in Illinois Plant

Unisorb resilient pad mountings for a Baum Model 55 folder at the Frye Printing Co., Springfield, Ill., are shown in Fig. 4. This company installed these pads under its other machines. Flooring in the plant is concrete. Resilient mountings have substantially reduced noise. Their cushioning effect reduces wear and maintenance.

These pads are cemented to the floor on one side and to the base or feet of the machine on the other side. This holds the machines securely to the floor for an indefinite period. Usually the pads are made somewhat larger than the feet or base so that there will be no danger of overhanging and to increase the holding power. In cases where the load needs to be distributed over a greater area of pad a steel plate of the required area may be used under the base or feet with a resilient pad placed between the plate and the floor. All the parts are cemented to each other and to the floor.

Higher Machine Speed

The A. T. Howard Co., Boston, in 1945 mounted its presses and other machines on Unisorb pads (Fig. 5). It was found that vibration was reduced so they could be run at high speed and the noise was also much reduced. The management states that the pads have stood up uniformly well without any tendency to deteriorate.

Use of cemented pads has a def-

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How *tight* do you want them? With the Model 12, tension can be predetermined and uniformly maintained on all packages, regardless of size or weight. A special device compresses and holds them in position during the tying operation.

The Gerrard Model 12 comes in two sizes, and utilizes extra-strong USS Gerrard High-Tensile Round Steel Strapping, 14 through 18½ gauge. The machine requires only 7½ square feet of floor space. Table height is 31″; weight is approximately 1350 pounds. It can be threaded in less than a minute—and it's a cinch to operate. You don't even have to adjust it for packages that vary in size and shape. Maintenance is no problem, either, because the Model 12 has a one-shot built-in lubrication system.

If you want more information, contact your USS Gerrard sales representative. Also send in the coupon below for the folder and the Gerrard Blue Book of Packaging. There is no obligation.

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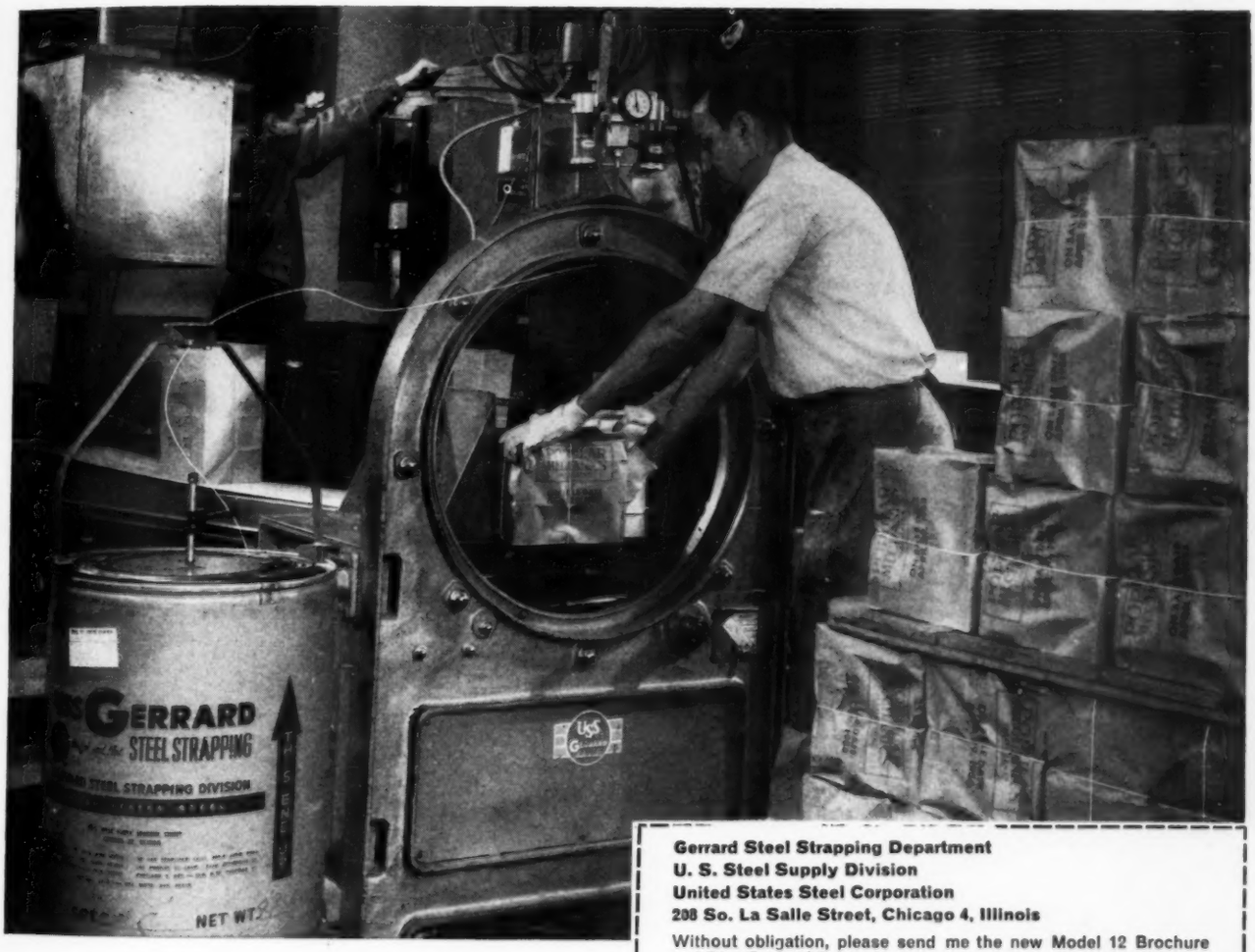
The USS Gerrard Model 12 Automatic Strapping Machine in use at *Popular Mechanics* Magazine, Chicago, Illinois



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inite advantage when it comes to fastening the machines to the floor. They make it unnecessary to go to the expense of drilling bolt or lag screw holes in wooden floors. When it is desired to move the machine the cement is readily loosened with a suitable solvent, the floor remains undamaged and the pads, after cleaning off the old cement, may be used again.

In cases where shims or leveling blocks are necessary, the usual types are used between the pads and floor and cemented in place.

Various types of Unisorb pads are available for different per square inch loadings and they come in thicknesses from ¼ in. to 1 in. When properly installed, they reduce transmitted vibration and noise from 60% to 85%.

Unusual Press Isolation

At the plant of the Providence (R.I.) *Journal* and *Evening Bulletin* extensive use has been made of Fabreeka resilient mounting material which consists of canvas and rubber compound in laminated form. Several years ago a story was added to the existing three story building to provide executive offices and radio studios. Before the actual design work began the management, in cooperation with the Johns-Manville Co. and its radio consulting engineers, had a test room built which was mounted on coil springs and channels to simulate the type of vibration-proof floors under consideration. This room was built on the third floor and the presses were run at all speeds and combinations to give maximum vibration. Tests made in this experimental room showed that the vibrations would not be noticeable with the proposed type of construction. Consequently the floors were built in this manner and the walls hung with Johns-Manville hangers.

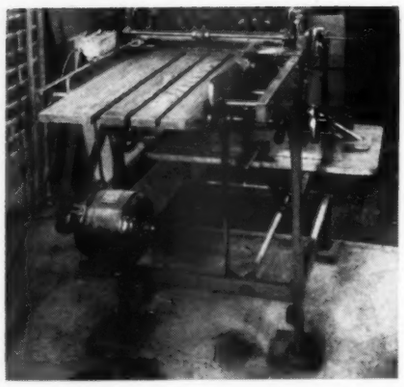


Fig. 4—Unisorb resilient pad mountings (Felters) for Baum folder at Frye Printing Co., Springfield, Ill.

When the time came later on to install a new press consideration was given to eliminate any chance of vibration intefering with satisfactory operation of the radio station. This was complicated by the facts that the foundation in the reel room is waterproofed so that it was possible to cut into the floor only about 10 in., which meant that the press column footings and isolation would all have to be placed within the 10 in. depth.

Isolation was designed by Lockwood Green (Boston consulting engineering firm) so that the entire pit was lined with a thin layer of the Fabreeka resilient material. Underneath the press columns is a sandwich of two steel plates with Fabreeka pads between them.

The edges of the pit are lined with cork to isolate the press column bases from the surrounding floor. It is placed at right angles to the Fabreeka and is 1 in. thick. Reinforcement was installed for the floating slab and angle irons placed around the edge. The edge of the pit was also finished with angle irons and the concrete poured. The space left above the cork was sealed with mastic to the level of the reel room floor.

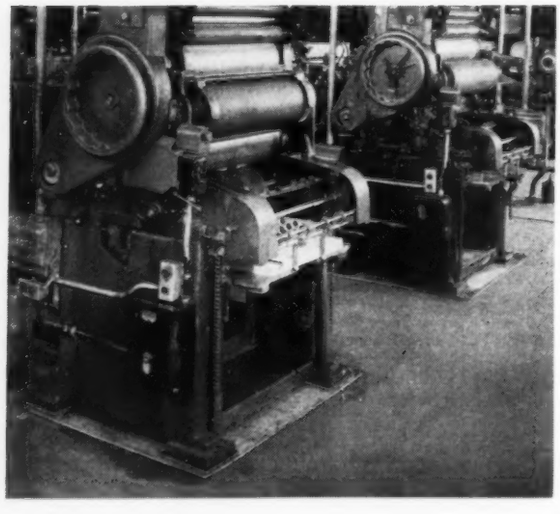


Fig. 5—Little Chief offset presses in A. T. Howard Co. plant, Boston, mounted on Felters Unisorb pads.

ROP Color Ad Betterment Discussed in New Bulletin

What is needed in materials to improve the quality of color advertising in newspapers is outlined in a report issued to members by American Newspaper Publishers Assoc.

Entitled *Preparation of Engraving and Duplicate Printing Material for Run-Of-Paper Color Advertising*, this is the work of the Joint Committee on Newspaper Printing of the ANPA and the American Assoc. of Advertising Agencies.

The report is available on request to American Assoc. of Advertising Agencies or to the American Newspaper Publishers Assoc., 750 Third Ave., New York 17, N. Y.

NPC Honors Proofreader—Miss Kate Jasper, the proofreader who never was hired and stayed on to retire, was honored recently after 53 years of service at National Publishing Co., Washington, D. C. Back in 1904, Miss Jasper swapped jobs with her look alike sister and by the time the impersonation was recognized, she had proved she was well qualified. So she stayed on without ever applying for the job. Recently composing room and company officials of NPC gave her a farewell party to mark her retirement. Leslie C. Shomo, executive vice president, is shown presenting a check to Miss Jasper on behalf of the company.

Production Problems

FOUGHT

Hard for Attention

By ROBY WENTZ

. . . at Los Angeles ITCA convention; reproduction proofs from hot type composition analyzed thoroughly.

PRODUCTION problems fought hard for attention at the convention of the Intl. Typographic Composition Assoc., held at the Ambassador Hotel, Los Angeles, October 14 to 17. But for the most part they were submerged in favor of management issues, entertainment and internal affairs of the ITCA.

This did not indicate any lack of interest, but rather, lack of time.

The best of the sessions which related to production was that on *Reproduction Proofs from Hot Type*. The three speakers were Norman Boyden, Syracuse Typesetting Co., Inc., Syracuse, N. Y.; Clyde S. Hunter, Ludlow Papers, Inc., Brookfield, Mass., and William W. Mason, John C. Meyer & Son, Philadelphia.

"To be perfect, typesetting must start in the metal room," Boyden told his hearers. "Too many plants treat the metal room like a janitor's closet. Following a formula is important. We test for metal content once a month, especially for tin content."

In another session, later the same day, an Eastern typesetter deplored the variance in analyses obtained from different typefounders, who offer analysis service, on identical metal specimens.

Boyden offered a fairly routine set of maintenance precautions, such as checking linecomposing matrices for sidewall damage and alignment, cleaning metal pot mouthpieces and cleaning pot throats, etc. In his plant, mouthpieces are removed once a year and cleaned, he said.

"Don't sell the bank boy short; he can be a most important factor in obtaining first-rate proofs," Boyden warned. "After all, he can be the one who assures that type is delivered to the makeup man in perfect shape—scraped, brushed, inspected for faulty slugs in line-cast type."

Hunter devoted his comments to describing development of Ludlow's Relyon reproduction proof paper. The paper was developed, he asserted, as a result of requests from trade compositors for a paper tailored to their needs. He warned that Relyon is not a ruling sheet and is not intended to be one. It is designed to take a proof from hot metal type, he said.

"Have you ever inspected the packing on your press (proving press)?" Mason asked in his talk. "The maintenance of your press is as important as the maintenance of your composing machines."

Proof Press Makeready

"Some people," he commented, "don't do makeready on a proof press—we do. We run all our packing one onion-skin shy, and we underlay every form that goes on the press." He lauded the use of Perma-Film for makeready.

Turning to rollers, he expressed a preference for Extron rollers. "They're expensive but they're worth it, although a set can run to $75 or $80."

He advocated use of Hi-Speed Quoins, aluminum spacing material (again, expensive but worth it), etc. Finally, last but not least, he pointed out the necessity for a quality pressman.

"It's the pressman who either creates your reputation as a deliverer of fine repro proofs, or destroys that reputation," Mason reminded type setters. "Too many people are not analyzing their personnel."

"How To" Specialties

The general production clinic turned into a discussion of gadgets and "how to" specialties. A leader in this field appears to be Albert L. Glassberg of Central Typesetting, Philadelphia. Glassberg provoked great interest in describing a liquid solution he has developed to use as a substitute for graphite with spacebands. It contains no water, he said, keeps graphite out of magazines and saves time. Central, he said, uses alternate sets of spacebands with the solution, using one set while the other set is drying.

He also told of a photoelectric eye device his firm has developed, installed in the channel entrance on mixers, which eliminates jamming of matrices on mixers.

A discussion of the causes of hairlines developed into general agreement that some of the high legibility faces, whose matrices have thin sidewalls, tend to break down on the sidewalls. Faces mentioned were Times New Roman, News Gothic Condensed, among others.

Phototypesetting

As has occurred at several conventions this year, ITCA members heard up-to-date reports regarding phototypesetting machines. Those discussing their company's equipment were: Alphatype — William Weber, Filmotype Corporation; ATF Typesetter—Orson H. Udall, American Type Founders; Fotosetter—Robert T. McIntosh, Intertype Company; Linofilm—Herbert S. Rand, jr., Mergenthaler Linotype Co.; Monophoto—Joseph P. Quigley, Lanston Monotype Co., and Photon —Earl N. Godshall, Photon, Inc.

Lightbown Delighted

By October 15, some 165 persons (103 men, 62 ladies) had registered. Frank Lightbown, ITCA president, Boston, said he was agreeably surprised and delighted at the size of the attendance, considering this is the first convention ever held on

the West Coast by the ITCA.

"It's not too far short of what we expect in the East in a normal year," he said. "Mid-Western attendances are usually largest."

Next year's convention will be held in New York, N. Y., during the week of the Educational Graphic Arts Exposition, at Hotel Park Sheraton, September 9-12.

New ITCA officers are: Walter R. Adamson, Mono-Lino Typesetting Co., Toronto, president; Clarence E. Harlowe, Harlowe Typography, Washington, D. C., first vice president; Henry Wolf, Service Typographers, Chicago, second vice president; John W. Shields, John W. Shields, Inc., Bridgeport, Conn., treasurer, and W. E. Switzer, Philadelphia, executive secretary.

Help Fight TB

Buy Christmas Seals

Paper Picking?

(Continued from Page 45)

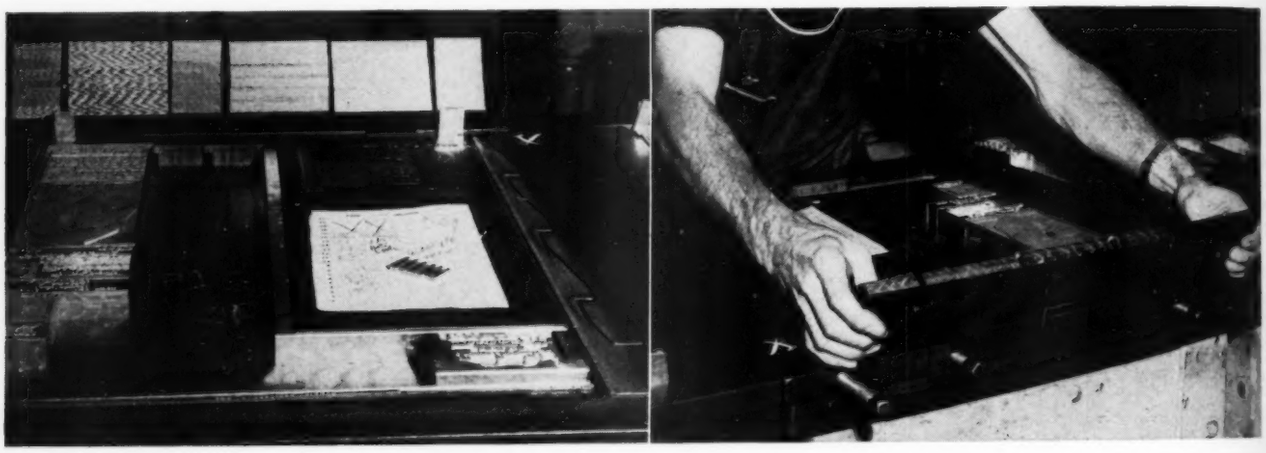
principally by oxidation, partly by absorption, while oil base book and magazine inks dry principally by absorption and partially by oxidation.

Multi-color heat-set inks, although they must have some spread of tackiness, have this to a lesser degree than multi-color inks made on an oil base. This is due to the fact that a volatile solvent is used in their formulation and such materials reduce the tackiness of the inks. This reduction in spread of tackiness must be compensated for by making the paper with a greater degree of surface ink receptivity than that required for similar work done with oil base inks. This additional surface absorbency permits each ink to enter into the sheet slightly before the next ink is applied, thereby giving the effect of each succeeding ink printing to some extent on the paper itself as well as on the preceding ink.

It is obvious that the ink receptivity of a satisfactory paper for web press work must be greater than that of a paper for a sheet-fed press, although the contrary is not necessarily true. Web press paper must be ink receptive in order to avoid offset and smudging and present proper trapping of superimposed inks. The kind of ink used also has a bearing on this, particularly since the introduction of heat-set inks. Even with these inks the paper must have a high surface ink receptivity to insure that it will pick up enough ink from the plate to give a satisfactory color to the finished job. The use of this kind of ink eliminates both offset and smudging, formerly bugbears in web presswork and permits the printed work to be sent directly to the bindery.

Offset inks, like process inks, dry principally by oxidation. An exception is the ink used on a web offset press equipped for heat-set inks. Rotogravure inks, as previously stated, dry by evaporation. The newer kind of web press book and magazine inks, known as heat-set inks, dry by evaporation and absorption.

(To Be Continued)



Work Simplification Makeup Tray—Some time ago, in the composing room of the Zanesville (O.) Publishing Co., Earl Shaeffer adopted and put into effect a number of work simplification ideas. Shaeffer is no longer connected with the paper, he having retired. One of Shaeffer's innovations is that of devising a means for converting the page form trucks into complete makeup units. While the makeup man is assembling a page form, all spacing and cutoff materials as well as column rules are readily available right at the truck upon which the page is being made up. This consists of a steel tray mounted at approx. 20 deg. angle at the bottom of the page. The tray is fabricated from 1/16 in. steel and measures approx. ¾ in. deep by 20 in. wide by 5 in. from top to bottom. The tray is divided into six compartments for holding material as follows: Left hand compartment contains 2 pt. single column leads, next compartment double column 2 pt. leads, next two compartments hold single and double column cutoff rules, and the two right hand compartments contain single and double column 6 pt. slugs.

By referring to the illustrations, it will be seen that the tray is held at approx. 20 deg. angle. The bottom of the tray is welded to two inverted U pieces of steel the projections of which fit over the bottom of the chase. The front projection, of course, is slid between the chase and footstick.

As will be seen in the right hand illustration, a broadly U shaped brace has been welded at the tops of the extensions to the back of the tray. The lower part has been deflected outwardly so it rests on the bottom chase locking screws.

The tray is easily moved from chase to chase as each page makeup is completed. In a newspaper plant, minutes or even fractions of minutes are valuable. This particular device was created to conserve fractional minute time before editions as well as to conserve physical energy by having all makeup materials immediately at hand.

Reference has been made above to column rules being available for immediate use during makeup. These are kept in full length machine case form in an inclined scabbard fastened underneath the truck top to two truck legs. This scabbard originally was devised in the composing room of the Louisville (Ky.) *Courier-Journal* and *Times* and reported by Composing Room Supt. C. Frank Mann in *Printing Equipment Engineer* some time ago.

Litho Competition Launched—The 9th Annual Lithographic Awards Competition and Exhibit has been launched by Lithographers National Assoc. Forming plans is the promotion committee (reading clockwise around table): LNA Executive Director Oscar Whitehouse; Howard C. Minnich, U. S. Printing & Litho Co., Cincinnati; Ralph D. Cole, Consolidated Litho Corp., Carle Place, N. Y.; George J. Walsh, Offset Engravers Assoc. Inc., New York; Alfred B. Rode, Stecher-Traung Litho Corp., New York; Douglas J. Scott, H. S. Crocker Co., New York; LNA President Les Oswald, E. F. Schmidt Co., Milwaukee; Promotion Committee Chairman Thomas P. Mahoney, Regensteiner Corp., Chicago; LNA Promotion Director Herbert W. Morse; William Carmichael, Lutz & Sheinkman Inc., New York; Fred S. Howard, Crane Howard Litho Co., Cleveland; and Albert J. Gross, A. D. Steinbach & Sons, New York.

Making Contact Screen Tint Negatives

(Published through courtesy of Lithographic Technical Foundation, part of Research Report No. 37.)

UNDER the best conditions, the making of even tint negatives with a magenta contact screen is a tough job. While there is no easy way to do it, here are a few suggestions from the Lithographic Technical Foundation.

According to work done at LTF, you can almost always count on having trouble with Newton rings, dust specks, and poor contact, as long as you use a vacuum frame. There is much less potential trouble if you hold the film and the screen on the camera vacuum back. Patterns from the vacuum back grooves can be avoided by attaching a thin aluminum sheet to the vacuum back. This sheet should be about 0.005 in. thick. A piece of presensitized plate works very well. It should be about ½ in. smaller in each dimension than the outermost groove covered by the contact screen. This will still give good vacuum between the screen and the film and will eliminate the effect of the grooves on the camera back. Attach the metal sheet on the vacuum back and the film to the metal with small pieces of thin, transparent tape.

Expose the film with the flash lamp, if your camera is so equipped. If not, LTF suggests a clay-coated or glazed art stock paper as a flash sheet mounted on the copy board. Select a piece that is clean and free from blemishes. Mask the edges of the sheet with wide strips of black paper. Pull the lights back as far as possible and carefully center them. Use test strips of film to determine the proper exposure.

The development of tint negatives must be done very carefully to avoid unevenness and streaks. LTF found that extreme high-contrast, fast working process developers seem to be very critical to handle in this type of work. Even when they are diluted with water, the usual tray rocking techniques and slight changes in temperature make the tints develop unevenly.

Some films and plates may themselves contribute to unevenness. The emulsion on glass plates sometimes varies slightly in thickness which causes uneven tints. Emulsions on films seem to be more consistently uniform.

After many experiments with special agitators and different developer dilutions, LTF finally went to a slightly softer, slower working, high-contrast, process developer. Results with this developer were very satisfactory. The tints were smooth and even. It was necessary, however, to make contact prints of these tints to get the dot hardness and contrast desired.

Even though this procedure requires two steps, in practice LTF found it more economical. It is much more dependable and the number of rejects ordinarily produced by the one step method is sharply reduced.

The developer LTF used is shown in the accompanying table.

For use, mix equal parts of solutions A and B as indicated in the table. Develop for 5 min. at 68 deg. F.

For even development, tip the tray from the right side, bottom, left side and top. Wait 5 sec. between each tipping. Keep rotating like this around the tray for the full development period.

This method will produce fairly satisfactory tints of values under 50%. Ordinarily it is very difficult to make even screen tints above 50% with a contact screen. Your best bet here would be to make tints with smaller dot sizes and use these as master negatives for contact printing the other tints. For instance, if you want a 75% tint, make a 25% tint first. Then use this tint as a negative and contact print it to produce the 75% tint. This method is not completely satisfactory but it is better than trying to make the 75% tint direct from the contact screen.

You can avoid a number of the usual difficulties in making good contact prints by exposing them with an LTF Contact Printing Lamp.

Cramer Process Developer for Tints

Solution A:	Metric Units	U. S. Units
Water (warm)	1 liter	32 liq. oz.
Hydroquinone	45 grams	1½ av. oz.
Sodium Sulfite	30 grams	1 av. oz.
Sulfuric Acid, C.P.	4 cc.	⅛ liq. oz.
Solution B:		
Water (warm)	1 liter	32 liq. oz.
Sodium Carbonate	30 grams	1 av. oz.
Potassium Carbonate	90 grams	3 av. oz.
Sodium Sulfite	90 grams	3 av. oz.
Potassium Bromide	8 grams	120 grains

Photoengravers

(Continued from Page 55)

"Early tests indicated some very definite improvements in halftone negatives as a result of using controlled fluorescence in photographs but there were still two major problems to be faced, one was the problem of selectivity. In that with the regular fluorescent photograph there was added the same amount of fluorescence in each part of the photograph of a given tone value as in any part of the same tone value. Perhaps you wanted to lighten in another."

Continued the speaker: "Secondly and of far greater importance, was the need to get selective control contrast into any photographic print.

"For these reasons, Kemart has introduced two new products both of which are transparent fluorescent material. One is called Tone Lightner and the other is Brightner. These are not just for dropouts but to accomplish a wider range of contrast in the halfone negative comparable to staging and re-etching for improved contrast."

As described, the method consists of applying fluorescent chemicals and solutions over a photoprint which when exposed under ultraviolet light results in increased tone gradations and contrast which otherwise would have to be obtained by staging and re-etching.

Modern Stripping Technique

R. D. Schulz, Graphic Reproduction Sales Div., Eastman Kodak Co., spoke on *A Modern Stripping Technique for Modern Art.* He dwelt upon the fact that modern art in connection with advertisements is becoming more and more complicated, creating many operations for the photoengraver to produce the desired results. These in many instances are obtained by highly skilled stripping and combining of negatives, particularly in color work. Glass plates upon which most of this work was formerly done has been replaced by film made especially for the purpose.

"Well, what *do* you use a lineup table for?"

Vandye J. Forrester, jr., engraving room foreman, Miami (Fla.) *News,* delivered a highly interesting address on the subject of *Four Color Process Engraving for Newspaper ROP Printing.* His talk was enlightening and was interspersed with humorous remarks by the speaker and illustrated with a number of slides which made known every step in the complete operation.

Stable Base Films

Flexibility of Making Color Separations by Robert T. Martin, Graphic Arts sales service, E. I. du Pont de Nemours & Co., Inc., served to introduce Du Pont's new line of flexible stable based films. Because of their versatility, a whole new field of opportunities for masking and masking systems has been opened to the photographer.

"Because of the stability and thinness of Cronar polyester Graphic Arts films," said Martin, "the photographer can now select and choose from the multitude of color correction systems available. If he desires, he can intermix systems to best suit his particular requirements. To illustrate the flexibility of color correction with these new stable based films, we have prepared a set of color separations during the very straightforward positive masking technique and have included data on two other systems which will produce equally fine results. It is not our intent or purpose to hold these systems up as new or original. We are merely attempting to show how you can use stable based film with any one or a combination of systems to produce superior color reproduction."

Equipment-Supplies Exhibits

The exhibition of photoengravers' equipment and materials was up to the minute and included all that was new. It was well displayed and attracted a great deal of attention and viewers at all hours during the convention period. The exhibitors, 40 in number, reported both interest and sales beyond expectations.

Most new devices represented in the main refinements and additions to established designs and forms. Among the distinctly new inventions was the XQO Xenon Tube Lamp by the Macbeth Daylighting Corp. (See the separate item on page 55, in this issue.)

The Klischograph electronic engraving machine was exhibited and demonstrated in color plate production. It is finding a rapid and enthusiastic acceptance in European countries and is attracting much attention here. The latest improvements in fluorographic pigments and lights is to widen the range of color plate production, as well as in monochrome work.

Cameras have been improved in all essentials, including design and construction. All are built of suitable metals and flexible materials with controls that cover every moveable part. All are precision built and are worthy specimens of the tool makers', mechanical engineers' and machinists' art. There is no longer an excuse for non-register in any phase of color plate production from the camera to the proof press.

Lithoflow Process

The Haloid Lithoflow Process is a machine that automatically develops, fixes, and washes negatives. This is the first time such equipment has been introduced in the Graphic Arts. Etching machines are designed for every etching process, darkroom equipment, arc lights, temperature controls, in fact the tendency is strongly toward automation, with emphasis on quality as well as speed.

EQUIPMENT & SUPPLIES

If you wish additional information concerning equipment, supplies, and/or technical literature, please make your request on *Printing Production's* Reader Service Card to be found in this issue.

Improved Star Distributor Boxes For Linecomposing Machines

Star Parts, Inc. has announced an improvement in its linecomposing machine distributor boxes. Special flathead pin-shank screws have been substituted for the conventional pins. With pin fastening there is said to be a possibility of distributor box damage when driving out the old pins. It is claimed new pin screws accurately position the bar in the box and are easily removed. Circle No. 253 on Reader Service Card.

Single Hand Lever Controls Vacuum Printing Frame

Among features of the Plate-Mate printing frame is a floating type hinge. This permits the top of the frame to be closed over the work without squeezing the plate and negative and without placing undue pressure on the rear beading of the blanket, reports Robertson Photo-mechanix, Inc. One hand lever locks the frame mechanically, actuates the vacuum pump

and motor unit and unlocks the anti-tilt safety device. When moved to the off position, the lever engages the anti-tilt lock, releases the glass lid lock, and bleeds the vacuum from the frame.

A vacuum actuated plunger will not permit the frame to be tilted to exposure position until sufficient vacuum pressure has been achieved. Once the frame is in the vertical position, the lid cannot open, even in the event of electrical failure. Frame can be used either as an offset exposure unit or for photoengraving for plate thicknesses up to ½ in. Circle No. 271 on Reader Service Card.

Pulsed Xenon Arc Lights For Photomechanical Illumination

Two models of Ascorlux Pulsed Xenon arc lights have been announced by American Speedlight Corp. Lamps are used for camera-copyboard and printing frame illumination.

A one light unit with a 12 in. tube in a 16 in. by 18 in. reflector Model A1111, will provide illumination for backlighting 16 in. by 20 in. areas. Model A1113 is a two light unit for process cameras with copy boards up to 30 in. by 40 in.

Ascorlux is announced as the new high intensity, color balanced constant light source recently introduced. Check off No. 250 on Reader Service Card.

Lineup Table Designed to Work with Register System

The Monoruler lineup table, which uses only one horizontal straight edge for both horizontal and vertical markings in conjunction with the built-in Square-A-Matic registration system, has been announced by Jos. Gelb Co.

The Square-A-Matic system consists of two sets of mating pins, mounted at right angles on the horizontal and vertical pin bars, and a two-hole register punch, also mounted on the table, with a work center positioning scale. The work is first punched for registration and then placed on the horizontal mating pins for horizontal marking; the vertical mating pins for vertical marking. The work is turned at right angles for either marking.

The vernier dial, calibrated in 1/64 in.,

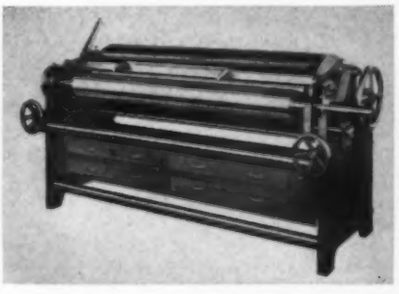
permits straight edge positioning to a tolerance of ±0.001 in., says the sponsor. Other features include a 31 in. square work area, two sets of paper clamps, individual floor levelling adjustments, and fluorescent illumination. Circle No. 268 on Reader Service Card.

Nashua Electric Sealing Tape Dispenser

Nashua Corporation is offering a National Electric Model 98 Vuematic CN machine which dispenses Itstix draft or reinforced sealing tapes with a center tear-tape. Standard diameter rolls of paper or fibre reinforced tape from 1 in. to 4 in. wide and tape lengths from 6 in. to 70 in. can be handled. Circle No. 278 on Reader Service Card.

Mosstype Introduces Proofer For Large Rubber Plates

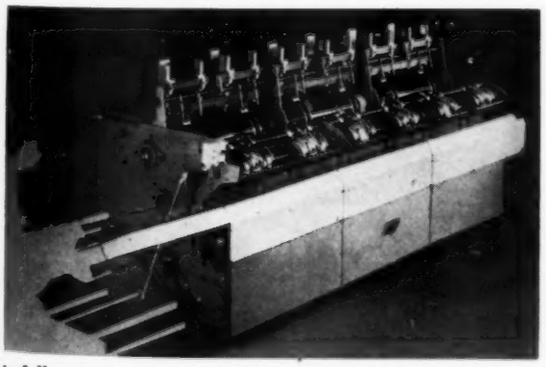
A new Mounter-Proofer machine, for setting up and proofing rubber plate jobs on extra large diameter plate cylinders, has been introduced by Mosstype Corporation. Designated the Series M-5, this unit can be made in various widths for plate cylinders up to 110 in. wide on journals.



A built-in proofing cylinder has a diameter of 21 in., permitting proofing repeats up to 63 in. long. The unit can be used with conventional shafted plate cylinders, D-Mount cylinders with demountable cores, and draw sheets or carriers used on presses with fixed plate cylinders. Circle No. 263 on Reader Service Card.

New Polymer Adhesive Has Graphic Arts Applications

A rubber-like adhesive, called A-916-B, has been announced by B. F. Goodrich Industrial Products Co. It is expected to find many applications in the Graphic Arts, including possible use as a binding vehicle



Automatic Saddle Feeder— An automatic saddle feeder which attaches to any gang stitcher without basic alterations has been announced by the Macey Co., sub. of Harris-Intertype Corp. Setup time is reported to be about 1 min. per station. A six station machine is standard but any number of stations can be added. Speed ranges from 1700 to 5000 sets an hour, according to the manufacturer. Continuous bottom feeding is fully visible from work stations. The feeder handles 4 in. by 6 in. to 13 in. by 18½ in. signatures, with a pile height of 11½ in. It is equipped with a portable control that enables the operator to jog, start, and stop at any position around the machine. Interchangeable pin type and vacuum type opening devices for lip and non-lip signatures are standard. Circle No. 264 on Reader Service Card.

for printing ink. The material is virtually colorless and transparent but could be furnished in any color. It is described as having chemical "hooks" attached to each molecule that compel the adhesive to cling to and join surfaces which in many cases have previously defied adhesion.

Suggested present applications include laminating films of Mylar, Cellophane, cellulose acetate, Pliofilm, polyethylene, polyvinyl chloride, Saran, Nylon or rayon fabric or yarn; paper to metallic foils or to any combination of polymeric films; adhesive tapes; cartons or envelope closure adhesive; flocking adhesive; and advertising poster adhesive. Circle No. 269 on Reader Service Card.

New Penco Steel Shelving Is Boltless and Adjustable

A new line of boltless adjustable steel shelving has been announced by Penco Div., Alan Wood Steel Co. Called Penco T shelving, it is designed for fast installation and ready rearrangement of shelves. Basic element of the shelving is the channl clip shown in illustration. The

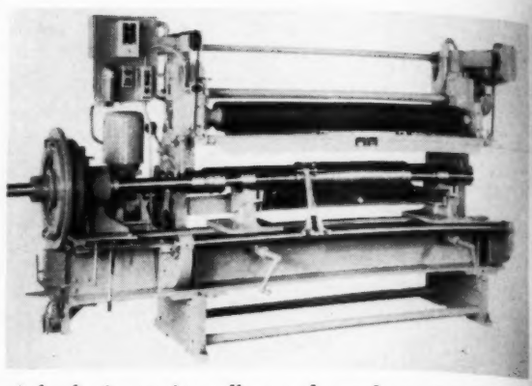
projective part of this clip consists of two stamped T's that are inserted through the holes in the upright angle post. The receptive unit slides over these T's, clamping both parts in place. When this is done, the clip's flaired top fits under the edge of the shelf. Shelves can be rearranged on 1 in. centers.

Penco T shelving is available in open and closed type standard shelving and in ledge and counter units. It is made in depths of 12 in. through 36 in. and heights from 3 ft., 3 in. through 10 ft., 3 in. Standard width is 36 in. Circle No. 256 on Reader Service Card.

New Synthetic Material Used in Letterpress Rollers

Letterpress rollers using a new synthetic material, Daycollan, are being manufactured by Roller Div., The Dayton Rubber Co. Daycollan rollers are reported to be non-porous, will not absorb ink. It is said they can be changed from printing black to pastel colored inks without bleed back. Abrasion and wear resistance are said to be increased. Field testing indicates, states the company, tack remains virtually unchanged even after prolonged usage. Rollers are being made for all sheet-fed press sizes. Circle No. 260 on Reader Service Card.

Rotogravure Proof Press—A semi-automatic proof press for pulling progressive gravure proofs has been announced by Standard Process Corp. After the operator registers the cylinder and places the sheet against the guides, he pushes the down button on control panel and press automatically follows the various stages of proofing until the operator removes the proofed sheet manually. Impression cylinder automatically elevates itself to the starting position. By means of a toggle switch, the impression roller can be made to remain in the printing position until an up button is pushed. Circle No. 276 on Reader Service Card.



Doublegrip Adhesive for Mounting Rubber Mats on Cylinders

Adhesive Products Corp. announces development of Doublegrip adhesive said to be intended for adhering rubber mats to printing cylinders. The adhesive is applied to both the rubber mat and the cylinder and allowed to dry for a few minutes. When dry, the rubber mat adheres on contact. Circle No. 277 on Readers Service Card.

Natural Lighting's Contact Printer Equipped with Pneumatic Platen

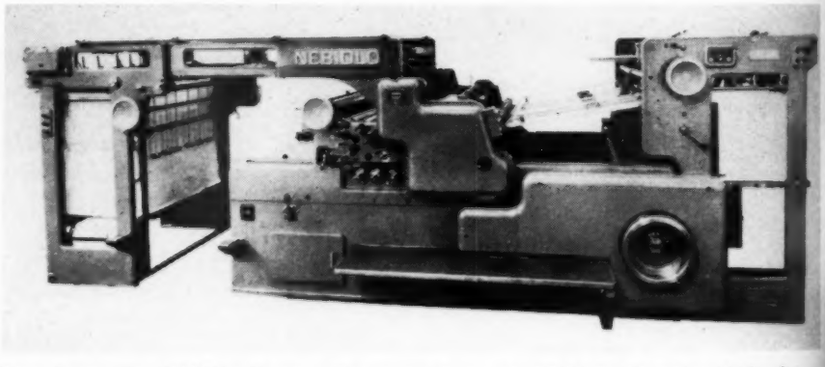
Natural Lighting has developed a contact printer equipped with a Morse pneumatic platen which forms what is described as absolute contact from negative to printing surface. Manufacturer also says the platen, when inflated with air, conforms to any surface and remains pliable.

Light color temperature of the Multi-Printer 12 in. by 20 in. contact printer may be controlled with a ColorTran Converter. Kelvin temperatures of 2900, 3200, and 3450 are available from the main control panel at the front of the printer. Exposure sources are four 150 w. or 200 w. incandescent bulbs which are installed in patented Miroflectors.

Manufacturer claims an average offset plate may be properly exposed in 1½ min. or less on the Multi-Printer. To facilitate multiplicity masking a second plain glass shelf is provided beneath the opal blanket. This provides a place to lay the masking on or as a shelf for a gelatin filter.

A point source illumination separate

from the main source of light is provided. To provide for unevenly exposed negatives each of the four main light sources is controllable with individual switches. Each blocks off a quarter area of the operating glass with a feather edge of illumination. Circle No. 254 on Reader Service Card.

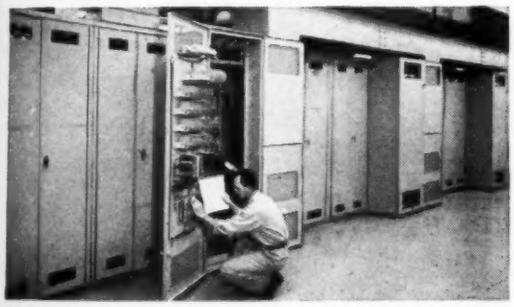


Two Large Size Nebiolo Presses—Two new, large size Nebiolo flatbed cylinder letterpresses are available from Amsterdam Continental Types & Graphic Equipment, Inc. They are an automatic two-revolution model with maximum sheet size of 31 in. by 44 in. and a single-revolution reduced-stop cylinder press with a maximum sheet size of 25½ in. by 38 in. The reduced-stop design incorporates a larger cylinder, reducing the jar of the stop-start motion, states sponsor. One feature of the two-revolution press shown here is a direct connection between bed and cylinder during the entire printing cycle. Circle No. 275 on Reader Service Card.

COMPACT, UNITIZED CONSTRUCTION of G-E low-voltage draw-out switchgear efficiently operates with minimum of maintenance. Dry-type transformer is conveniently wall-mounted above lighting panel.

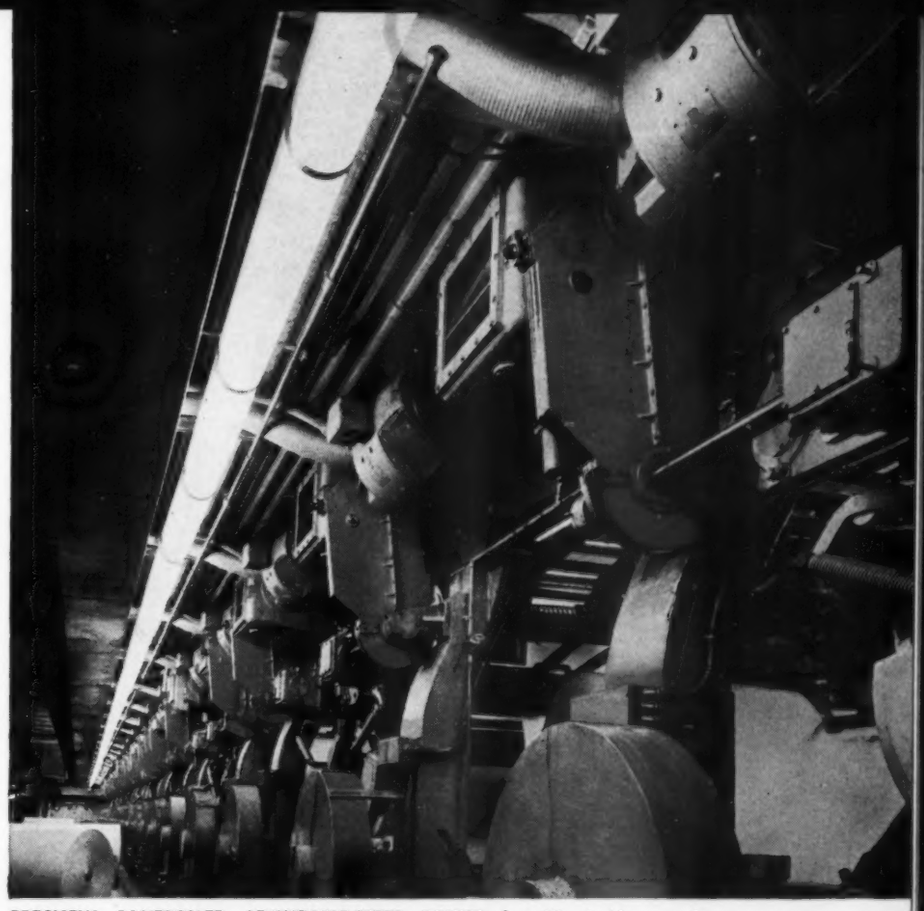
GENERAL ELECTRIC PRESS DRIVE control panels include: selector, magnetic and rectifier panels. G-E switchgear, with air circuit breakers, provides safer power distribution.

FULLY ENCLOSED cabinet containing ignitron rectifier tubes is examined by F. L. Gaussiran, chief electrician (left) and J. P. McKenna, electrician. Highly dependable units require only periodic inspection.



RECTIFIER FIRING circuits and tubes conveniently housed in rectifier compartment are easily accessible for inspection. Fully enclosed bus duct is top-mounted.

FAST RESPONSE auxiliary press control is line-of-sight mounted on a new Hoe press. Location of control facilitates press operation, reduces operator fatigue.



PRECISELY CONTROLLED ADJUSTABLE-SPEED POWER for *Miami News* main presses available from 24 General Electric 40-hp DC Drive Motors.

MIAMI NEWS SELECTS G-E DRIVES FOR . . .

Proved Reliability, Flexibility, Performance

Miami News gears for expanding circulation with a modern plant featuring G-E electronic d-c drives on 21-unit—3-folder Hoe presses

Modern in every respect—from its attractive exterior to efficient G-E drives—the new *Miami News* facilities represent one of the finest newspaper plants in the nation.

Complete coordination of the electrical system, including drives, switchgear and high-voltage G-E lighting was furnished by a team of G-E engineers familiar with the particular problems and interests of the *News* and the newspaper industry, and factory engineers skilled in the design and application of printing press drives.

With this installation, the *Miami News* joins more than seventy other major metropolitan newspapers who have selected G-E electronic d-c drive systems to provide production reliability, operating flexibility, ease of maintenance and over-all high performance on approximately 200 high-speed metropolitan presses.

For further information on system-engineered press drives—DC Electronic Unit Drives (Bulletin GEA-5523) for high-speed metropolitan presses, and the new Inductrol® DC Group Drive (Bulletin GEA-6763) for smaller presses—contact your local G-E Apparatus Sales Office or write to General Electric Company, Section 653-47, Schenectady, N. Y.

Engineered Electrical Systems for Newspaper Plants

GENERAL ELECTRIC

For More Information Circle 68 on Reader Service Card

Counter-High Storage Cabinet Provides Smooth Work Top

A counter-high steel storage cabinet which also provides a smooth top working surface has been announced by Penco Div., Alan Wood Steel Co. It is 36 in. wide by 24 in. deep by 42 in. high, in-

cluding a 4 in. base. Two shelves are adjustable on 2 in. centers. Cabinet has an all-welded construction from 20 gauge steel, 3 point door latching, steel angle reinforced frame, reinforced doors with chromeplated handles and a key lock. Circle No. 257 on Reader Service Card.

Rubber Faced Metal Type Prints Clearly on Hard Surfaces

Personalized or advertising messages, address marking, etc., on hard, non-porous surfaces such as glass, metal, plastics is done simply, quickly using a lockup of Markem Machine Co.'s rubber faced metal body type.

The type is available in sizes from 6 pt. to 72 pt. in modern type styles. It is packaged in fonts of caps, figures and punctuation; or lower case letters and punctuation; or a combination of both. All are type high (0.918 in.) but other heights are available on special order. Circle No. 252 on Reader Service Card.

Motor Gear Box Eliminated On Powderless Etching Machine

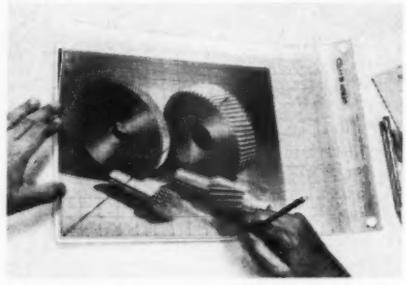
Elimination of a gear box on Master Etching Machine Co.'s new powderless etching machines has been made possible through use of General Electric Co. synchronous inductor motors. The 75 r.p.m. synchronous motor is said to provide the necessary constant speed. Because of inherent winding characteristics the synchronous inductor motor is impedance protected, thereby eliminating the need for any type of overload protection, according to G-E engineers. Circle No. 258 on Reader Service Card.

Developing Lacquer Treats Both Image and Non-Image Areas

A new one-step Rogersol developing lacquer for use on ungrained or brush grained aluminum presensitized and wipe-on plates has been announced by Harry H. Rogers Co., Inc. According to the manufacturer, it removes in one step the unexposed areas, applies a lacquer over the image, and protects the non-printing area from taking ink. It is also said to develop out-dated plates. Circle No. 270 on Reader Service Card.

Square-up Checking Device For Artwork, Proofs, etc.

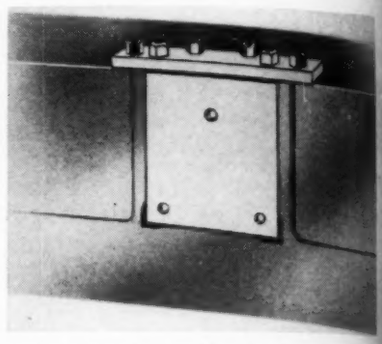
Check-scale is a new square-up device designed by Check-scale Products Co. for checking alignment of artwork, layouts, proofs and printed matter. It is also useful as a guide for checking measurement accuracy in camera and stripping depart-



ments. The device consists of a 17 in. by 11 in. grid scale calibrated in ⅛ in. increments, printed on a 0.005 in. thickness of mylar base transparent film. The film has been treated to hold precise measurements and is said not to stretch, shrink, curl, warp or discolor, and to take penciling and erasures easily. Circle No. 255 on Reader Service Card.

Center Adjustment on Knife Bar For New Lawson Cutters

An adjustable third or center bearing on the knife bar is now standard equipment on all new Lawson Pacemaker Cutters. In combination with adjustable gibs at both ends, it is designed to compensate for any wear that may occur in the knife bar bearing. The device consists of a metal pad set into the clamp body op-



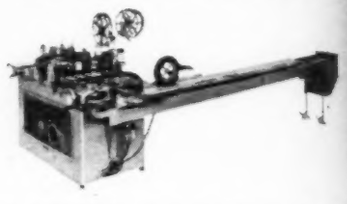
posite a bearing surface in the center of the knife bar. Set screws are provided to take up any slack due to wear. Circle No. 262 on Reader Service Card.

Lithographic Form Rollers For Presensitized Plates

A lithographic form roller designed to bring out the full potential of presensitized plates has been announced by Dayco Div., The Dayton Rubber Co. Known as Soft-Set, the roller contains Tru-Tac, claimed to resist glaze and improve water control. Circle No. 259 on Reader Service Card.

Automatic Labeling Machine For Publications, Catalogs, Flyers

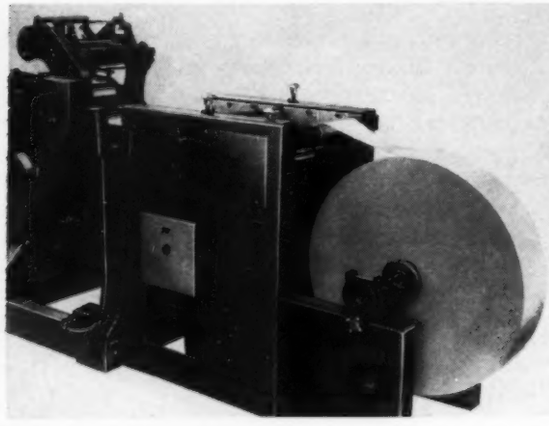
The new Cheshire Model C labeling machine is designed for applying address labels to magazines, catalogs, newspapers, tabloids and flyers at speeds from 5000 to 15,000 pieces an hour. A variety of labels can be accommodated. Solenoid-equipped labeling head prevents misses



and lost labels, says the sponsor. Label feeding, cutting, gluing, and attachment can be done while machine and pieces are in motion. Replenishing labels and glue supply can be accomplished without stopping the machine. A rotary head for applying wide strip and tape strip labels interchangeably is optional. Circle No. 267 on Reader Service Card.

Nickel Anode Line Now Offered by Federated Metals

Federated Metals Div., American Smelting and Refining Co., has announced addition of nickel anodes to its line of electrotyping materials. Federated's nickel anodes are all standard oval shaped and



New Era Automatic Unwinder—A new automatic stock roll unwinder has been developed for use with New Era presses by New Era Manufacturing Co. The electronically controlled unit attaches to any 9 in. by 12 in., 12 in. by 12 in., or 12 in. by 18 in. New Era press and handles rolls to 48 in. diam. with maximum core feed length of 3 in. at feed lengths up to 20 in. Features include a decurling device, spliceboard, paper cleaner and built in safety devices. The unwinder adjusts to speed of press, length of feed or type of stock. Readjustment is said to be required only when length of feed is changed for position adjustment for loop height and sensitivity adjustment to feed paper. Circle No. 266 on Reader Service Card.

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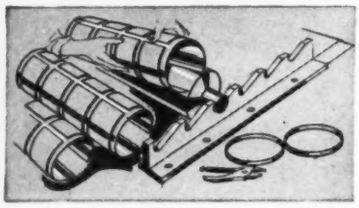
are available in rolled carbon, rolled depolarized or in 99% plus cast. Standard nickel anode hooks also are available. Circle No. 265 on Reader Service Card.

Multi-Unit Rubber Plates Announced by Porter & Dugas

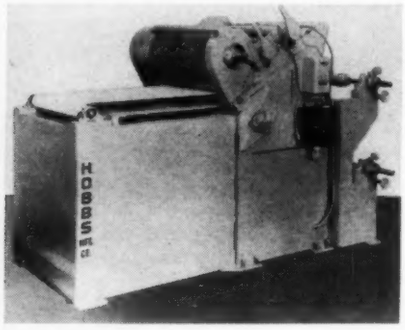
Porter & Dugas, Inc. has announced a process, known as the Multi Unit Plate, which produces step-and-repeat rubber plates on a common base. The process



involves using existing one-up sticky-back patterns or art to produce a complete cylinder sleeve with all components factory mounted in correct register. Circle No. 279 on Reader Service Card.

Hobbs Rotary Cutter Available in Widths to 60 in.

A new rotary cutter that can cut from rolls or in synchronization with in-process work has been reported by Hobbs Manufacturing Co. It is available in widths from 24 in. to 60 in. Pieces from 2 in. to 60 in. long can be handled in infinitely



variable cutoff lengths at speeds up to 50 cuts per min., says sponsor. Cutter can be supplied with or without slitting device for longitudinal cutting. Circle No. 274 on Readers Service Card.

New Manufacturer Announced for Imperial Hot Mould Polish

The Imperial Hot Mould Polish for use on line and type composing machines has been acquired by American Solder and Flux Co. The company will manufacture and furnish the polish. Circle No. 283 on Reader Service Card.

Plastic Binding Announces Electric Punching Binding Machines

Books up to 1⅜ in. thick can be bound on the Model 27 Plastico punching and binding machine manufactured by Plastic Binding Corp. The machine, which is 20 in. by 19 in., can be placed on a table or desk. It is equipped with a double shearing action which causes the dies to punch paper progressively from left to right, reports Plastic Binding. Hol-

Combination Plastic Sink—W. A. Brown Manufacturing Co.'s new plastic sink is furnished with a metal base and stainless steel apron. Three plastic trays, a negative wash sink, viewer and dot etch table with red and white light source, dump trough, combination swing faucet, and water spray extension hose are provided. A water temperature regulator is also included. The red fluorescent lighting under the plastic sink is said to enable inspection of development through transparent trays. Sink includes its own heating unit and hot water can be connected to the swing faucet. Unit operates on 110 V, a.c., 60 cycle, single phase current. Circle No. 273 on Reader Service Card.

low ground dies can handle sheets or covers up to 12 in. long. Other features are as follows: Silent timing gear train drive; ¾ h.p., a.c. split phase motor, 115 V.; bronze bushings, and all steel enclosed housing. The tripped electric foot pedal operates with light touch and can be placed where convenient. Circle No. 285 on Reader Service Card.

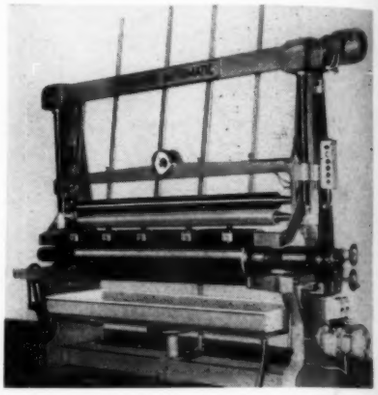
Penn/Brite Offset Paper In Smooth and Vellum Finishes

A brighter and whiter Penn/Brite offset paper has been announced by New York & Pennsylvania Co. Paper is manufactured in smooth and vellum finishes and a number of weights and sizes. New swatch books are in preparation. Circle No. 286 on Reader Service Card.

Carbon Tissue Transfer Machine, Important Features Are Mentioned

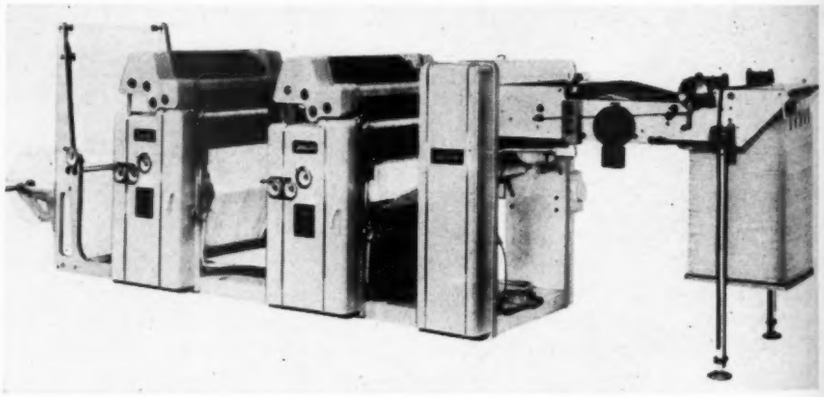
A new gravure tissue transfer machine, the Gramag Transfer-Automatic, has been reported by Henry P. Korn. Some of the features mentioned are as follows: Squeegee roller travels on motor driven bearing supports; three point register; adjustable and retractable register pins on laydown bar; automatic squeegee roller, and two-speed roller travel in each direction.

Another feature is that laydown bar adjusts automatically to diameter of cy-



linder being used. Transfer width ranges from 25 in. to 92 in. Machine has a max. height of 10 ft. Weight, floor space, squeegee pressure and cyl. cirmcumference are dependent upon model chosen. Circle No. 287 on Reader Service Card.

(*Continued on Page* 85)



Web Rotary Offset Press—Orville Dutro & Son Inc. has introduced a new web rotary offset press built in sizes 17½ in. by 13 in. and 17½ in. by 26 in., called the Speed-Flex Journeyman. With reported speeds of up to 20,000 r.p.h., this press is said to produce large solids, reverses, lines, type and halftones with good color and marginal registration. Illustrated is a two-color machine, but presses up to five-color can be supplied. Larger machines are equipped with finger tip planetary compensation, controlled from the delivery end of the press. Circle No. 261 on Reader Service Card.

PRINTING INDUSTRY PATENTS

Covering patents issued August 5, 12, 19 and 26.

All new patents for the Graphic Arts are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc. presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

SPEED CONTROL SYSTEM FOR LINECASTING MACHINES

The system is equipped to allow extra time for releasing successive matrices when they are of the same type. It includes three groups of relays selectively energized in accordance with successive combinations of perforations in a tape advancing through a tape analyzing device. The system can be used with any existing linecasting machine. Patent 2,846,055 by Joseph J. Ackell, assigned to Dow Jones & Co., Inc.

PHOTOCOMPOSITION

Lines are composed on a record strip in unjustified form. This strip may be proof read before the lines are assembled into forms. The strip is then rephotographed onto the final film, at which time justification is accomplished by exposing the words and adjusting the space between them according to space code dots. Patent 2,846,932 by Frederick J. Hooven and Richard C. O'Brien, assigned to Harris-Intertype Corp.

MAGAZINE CHANGING SYSTEM FOR LINECASTING MACHINES

Magazines for linecasting machines are changed over by an electro-magnetic system which energizes the magazine-changing shaft. One magazine is moved out of position as the next magazine is moved into operating position. A double electro-magnet or a solenoid may be used. Patent 2,847,116 by Karl Debus and Kurt Heimel, assigned to Linotype Gesellschaft mit beschraenkter Haftung.

PHOTOCOMPOSING MACHINE

The composing unit of this improved machine is separate from the photograph unit. Perforated tape is used for code signals. A pointer and scale device indicates length of a composed line and sets into motion a justification computer for figuring remaining space and storing the information for use in photographing a justified line. Patent 2,847,919 by Louis Rossetto, Gino F. Squassoni, Eugene F. Coleman and William S. Gorrill, assigned to Mergenthaler Linotype Co.

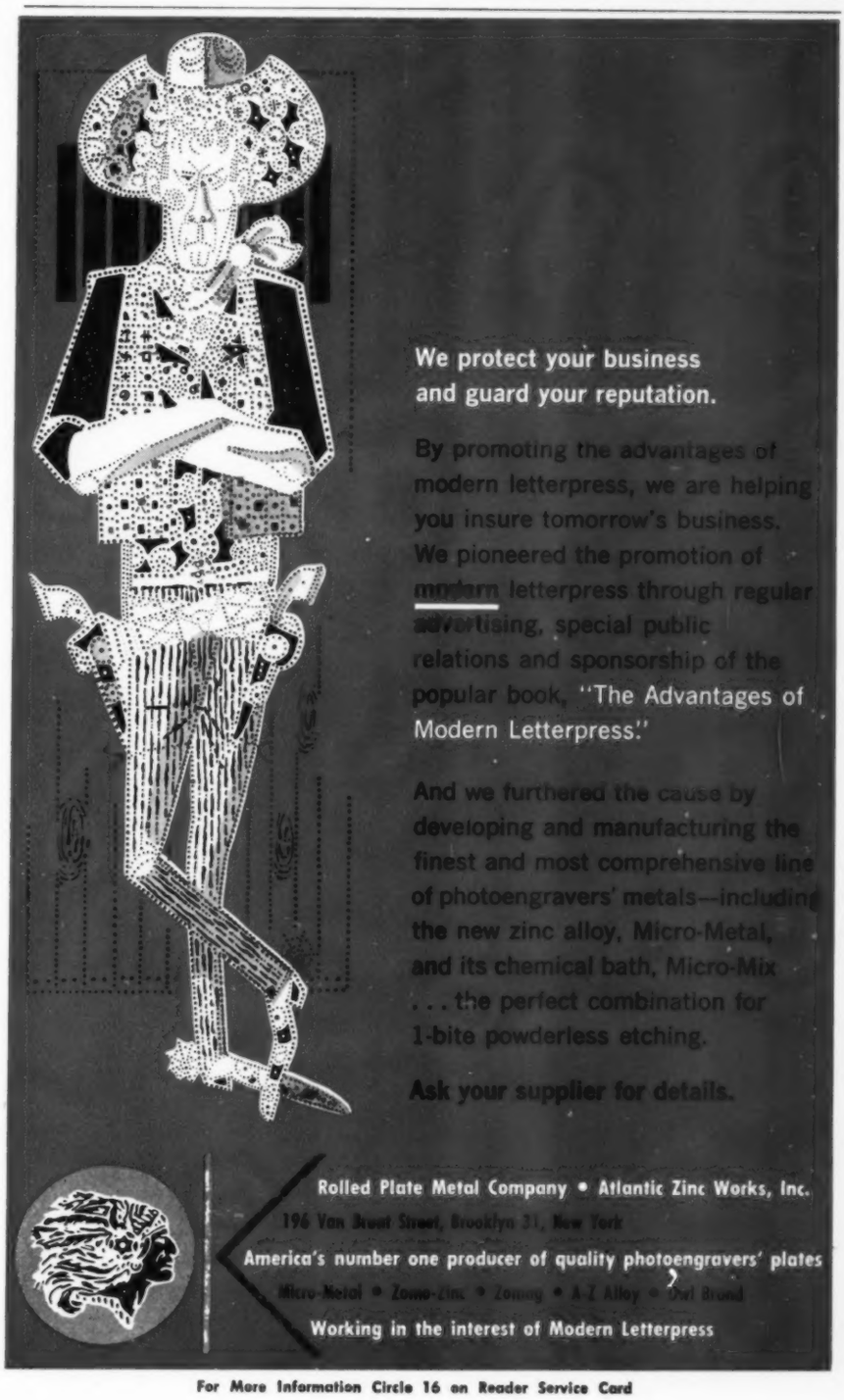
JUSTIFICATION COMPUTER FOR PHOTOCOMPOSING MACHINES

Justifications, quadding or centering information is computed for a keyboarded line of text and then coded on a control tape adjacent the representations of the individual characters of a line of type to be composed. The tape is for use in the photographic unit of a photocomposing machine and it controls composition of the text as a justified, quadded or centered line depending on the information coded on the tape. Patent 2,848,049 by Daniel H. Robbins and Victor M. Corrado, assigned to Mergenthaler Linotype Co.

Platemaking:

LIGHT SENSITIVE COATING

For use in lithographic and similar printing processes where greasy inks are used, this light sensitive coating comprises a mixture of casein, an aqueous dispersion of a latex selected from the group consisting of natural rubber latex and synthetic rubber latex, and disodium 4,4'-diazidostilbene-2,2'-disulfonate. Patent 2,-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848,328 by Martin Hepher, assigned to Eastman Kodak Co.

ETCHING BATH

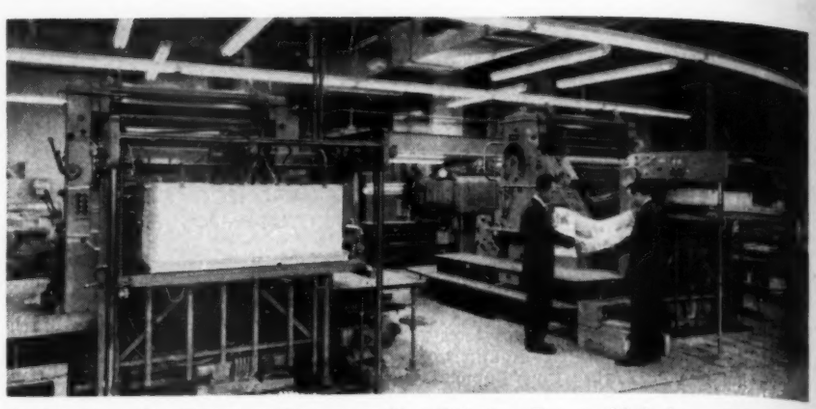
The etching bath eliminates lateral attack by the etcning solution, but gives the desired depth development throughout all the areas of the plate, even for such letters as a, o, g, e, etc. The bath is made up of an aqueous dispersion of nitric acid, a water-soluble salt of a tetradecyl sulfate, and a water-immiscible liquid petroleum fraction boiling in the range of 70 to 390° C. Patent 2,846,294 by Robert G. Patterson and Yoshikazu Yamada, assigned to Mergenthaler Linotype Co.

APPARATUS FOR CORRECTING PHOTOCOMPOSITION

The apparatus is of the type which includes a movable table, a frame for the film, and straight edge sighting mechanism for indicating the position of the film. The method locates the portion of an image to be corrected with respect to a gauge and allows as much as a line of type to be inserted. This applies to standard base or to standard center (body) line alignment. Patent 2,845,717 by Stephen L. Somerville, Robert P. Urry, and Bernard R. Halpern, assigned to The Monotype Corporation, Ltd.

ETCHING BATH

The etching bath of the present invention incorporates an alkyl aryl sulfonate in addition to the composition in patent No. 2,846,294. This results in a better base buildup and sidewall configuration on the plate. Patent 2,846,295 by Robert G. Patterson and Yoshikazu Yamada, assigned to Mergenthaler Linotype Co.



Miehle Press for 230 Year Firm—Franklin Printing Co., established in 1728 by Ben Franklin, has installed a Miehle 49 two-color offset press at its Primos, Pa., plant. Inspecting a sheet from the new press are William F. Tiernan, jr. (left), Franklin's executive vice president, and Miehle's William J. Stevens.

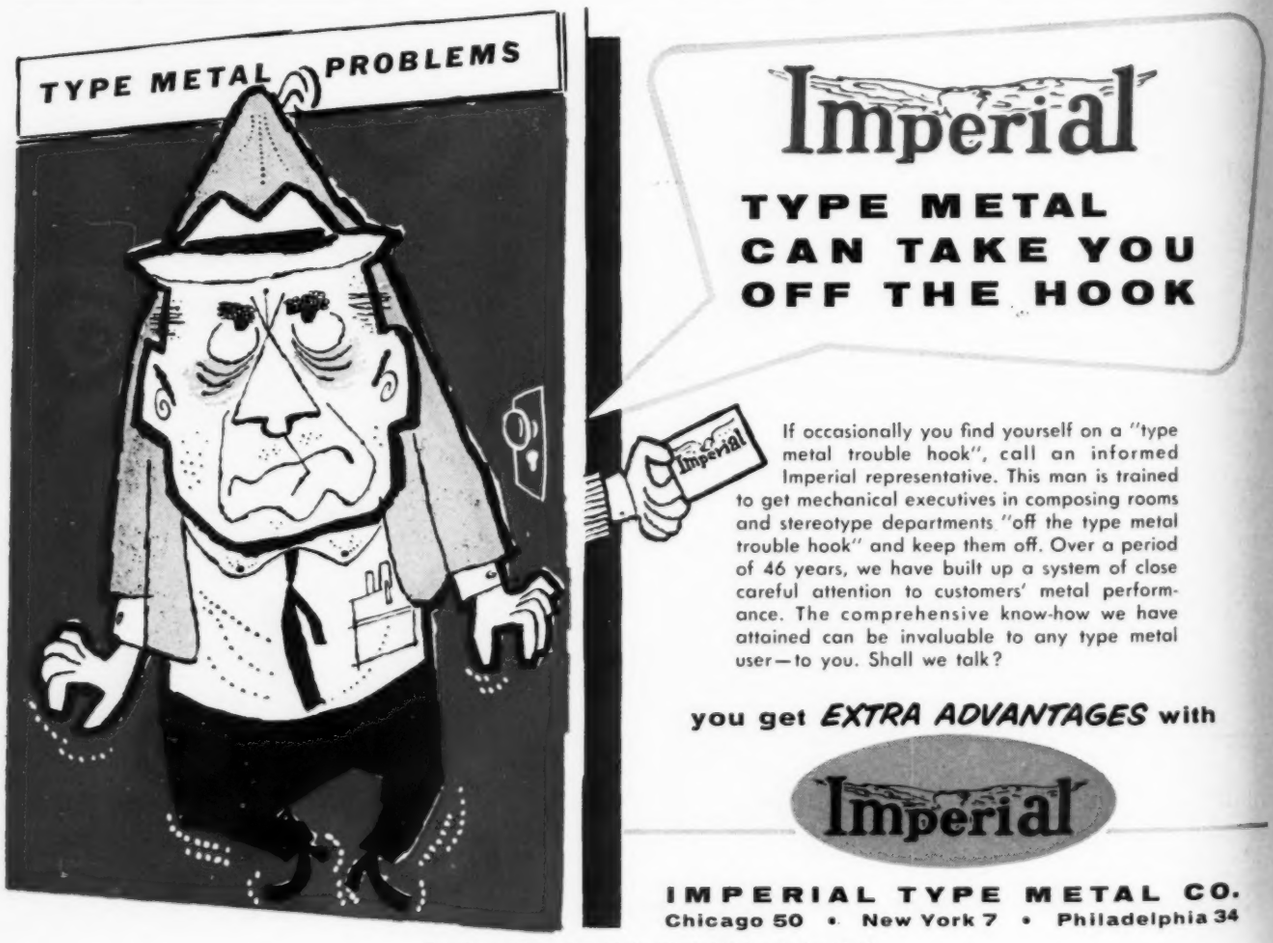
Printing Presses:

REVERSING DRIVE

Vibration of multicolor printing press drives is reduced to a minimum by a novel reversing clutch arrangement of the gear type in which the shafting and clutch elements are maintained in coaxial relationship. Patent 2,845,807 by Charles A. Harless, assigned to R. Hoe & Co., Inc.

TAG MAKING MACHINE AND METHOD

The web feeding mechanism of this machine provides for the automatic, minute registry of the web as it is being fed through an otherwise standard tag machine. Background tag data may be printed on webs which are then stored in coil form ready for a re-run. The minute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registry permits the superimposing of one color on another in re-runs. Patent 2,848,225 by Lloyd R. Price and Robert T. Ferguson, Jr., assigned to Robinson Tag & Label Co.

ROTARY AIR CUSHION FOR FLATBED PRESSES

A rotary air cushion, or compressor, which alternately compresses and expands the air, compensates the forces of inertia of the press bed during its reciprocation. The back pressure occurring during the compression strokes is transmitted to the machine frame in an opposite direction to the force of inertia of the type bed. Patent 2,847,208 by Artur Buttner, assigned to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

SHEET GRIPPER CONTROL

Varying pressures on the grippers for a sheet printing machine can be regulated, during a complete working cycle, in accordance with the stresses the sheets will experience. This is accomplished by a stationary control cam on the printing machine and a cam follower lever connected to a spring which transmits the pressure of the control cam to springs on a shaft on which the grippers are mounted. Patent 2,846,947 by Andreas Rodenhausen, assigned to Faber & Schleicher Aktiengesellschaft.

COLOR REGISTER ON SILK SCREEN PRESS

The machine interposes a time factor between the application of different colors, so that one color may receive a drying action before the next color is printed. The use of an uneven number of platforms (in order to have an overrun of platforms with respect to screens) brings each work unit which has received a color into registration with the next color screen on the next trip of the conveyor. Patent 2,846,946 by Arthur Schwarzberger, assigned to American Automation, Inc.

PRESS WASHUP ATTACHMENT

The entire train of printing cylinders may be cleaned of coating material by this device. A number of short blade members mounted in spaced alignment upon a single member are resiliently urged against the cylinder to be evacuated. This individual contact insures uniform and efficient cleaning. Patent 2,847,935 by Raymond R. Richter, assigned to The Dayton Rubber Co.

EJECTOR MECHANISM FOR PRINTING PRESSES

In a rotary duplicating machine, a transferring table raises and lowers in accordance with the printing roller and receives printed sheets in its higher position. An ejector belt is level with the table in its lowered position and cooperates with the transfer table to eject or deposit the printed sheets into a box or like container. Patent 2,847,214 by Wilhelm Ritzerfeld and Gerhard Ritzerfeld.

THE DAILY TIMES
DAVENPORT, IOWA

The Enid Daily Eagle
ENID, OKLA.

Pittsburgh Post-Gazette
PITTSBURGH, PA.

THE CORNING LEADER
CORNING, N. Y.

ROCHESTER POST-BULLETIN
ROCHESTER, MINN.

THE DAILY NEWS-TRIBUNE
LA SALLE, ILL.

The Greenville News
GREENVILLE, S. C.

WATERBURY AMERICAN
WATERBURY, CONN.

AURORA BEACON-NEWS
AURORA, ILL.

Vicksburg Evening Post.
VICKSBURG, MISS.

The Boulder Daily Camera
BOULDER, COLO.

FREMONT TRIBUNE
FREMONT, NEB.

THE PLAIN SPEAKER
HAZELTON, PA.

St. Paul Dispatch
St. Paul Pioneer Press
ST. PAUL, MINN.

The Vancouver Sun
VANCOUVER, B. C.

SPRINGFIELD LEADER AND PRESS
SPRINGFIELD, MO.

The Daily Olympian
OLYMPIA, WASH.

The Detroit Free Press
DETROIT, MICH.

THE KOKOMO TRIBUNE
KOKOMO, IND.

THE WENATCHEE DAILY WORLD
WENATCHEE, WASH.

The La Crosse Tribune
LA CROSSE, WIS.

EVENING HERALD
ROCK HILL, S. C.

THE WALL STREET JOURNAL
CHICAGO, ILL. AND WASHINGTON, D. C.

Los Angeles Times
LOS ANGELES, CALIF.

THE NEW MEXICAN
SANTA FE, NEW MEXICO

THE DAILY HERALD
BILOXI AND GULFPORT, MISS.

THE CHRONICLE-TELEGRAM
ELYRIA, OHIO

JOHN BARRON
Mechanical Superintendent of The Daily News-Tribune, LaSalle, Illinois, says:

"Our Carlson Finisher cuts mortises and finishes plates from two to five times as fast and does both better and more accurately than any machine we own or have tested. It saves many minutes so badly needed by smaller dailies. We have found it simple and easy and safe to operate. And we like its low cost, too."

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PRODUCTION PRODUCERS FOR GRAPHIC ARTS

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PAPER FEEDING MACHINE

Various folding operations usually permitted by expensive machines may be performed by this relatively simple unit. Several folding frames having individual drive motors are energized from a common control box by use of flexible electric cables. Each unit may be varied in speed or shut down while the other units continue. Patent 2,848,219 by David C. Beck, assigned to the Liberty Folder Co.

SINGLE SHEET DELIVERY DEVICE FOR WEB FED PRESS

For use with web fed, high speed offset or intaglio presses of the type which cuts the paper into sheet form just after it is printed, and stacks same, this delivery device is adapted to take single sample sheets from the press following the cut. This is accomplished without disturbing the delivery and stacking operation. The device may be used with the apparatus covered by patent 2,769,495. Patent 2,846,046 by Laszlo M. Stempel, assigned to John Waldron Corp.

SAFETY ATTACHMENT FOR AUTOMATIC PRESSES

The attachment consists of a pusher arm connected to a vertical tumbler rod, the movement of which causes the pusher arm to push in a trip pin. The trip pin must be pushed in when the press is started so that the tripping mechanism, for stopping the press when sheet misfeeds, is set. The attachment is especially designed for use with a flat bed and cylinder type printing press. Patent 2,845,862 by Robert J. Brazil.

DEVICE FOR CONTROLLING WEB TENSION

A transversably mounted slide carrying a pair of oppositely positioned controls can be moved by a contact arm which is connected to a tensioning roll, which arm is capable of moving the slide in opposite directions in response to vertical displacements of the tensioning roll to operate one or the other of the pair of controls and to cause traverse movement of the slide. Thus web speed can be increased or decreased. Patent 2,847,211 by Angus M. Halley.

BRAKING DEVICE FOR FLATBED PRESSES

There are one or more brake cylinders at each end of this press, each cylinder having a compression chamber connected with a counter cylinder by means of piping. The counter cylinder has a spring-loaded counter-piston arranged to be movable by action of compression pressure in the brake cylinder. This gives a braking force curve which coincides better with the retardation force curve. Patent 2,849,227 by Sten R. Stenstrom.

STACKING DEVICE FOR PRINTING PRESSES

A grate with a front cross bar serves as an auxiliary stacking table. Main tracks guide the cross bar over the stack on the main stacking table in a parallel path. A steeply inclined branch at one end of the main track guides the cross bar at the beginning of its movement. A lesser inclined branch guides the cross bar on its return movement. Patent 2,847,215 by Werner Koch, assigned to Faber & Schleicher Aktiengesellschaft.

North Shore Craftsmen's Club Elects—The North Shore Craftsmen's Club, serving parts of Illinois and Wisconsin, recently elected officers for the coming year. Seated, left to right, are: Alfred Sefton, National Office Supply Co., Waukegan, Ill., president; Bob Beyers, Dery Press, Waukegan, past president, and Harold R. Callahan, North Shore Printers, Inc., Waukegan, first vice president. Standing, left to right: William J. Bunton, jr., Dery Press, Waukegan, recording secretary; J. Franklin Reames, Callaghan and Co., Mundelein, Ill., treasurer; Ted Clavey, Navy Printing Office, Great Lakes, Ill., sergeant at arms; Kenneth Paul, Dery Press, Waukegan, financial secretary, and Elmer E. Burand, Waukegan *News-Sun*, second vice president.

SHEET FEEDING DEVICE

The grippers used for feeding sheets in a continuous stream to a press are successively arranged at a distance which is relatively shorter than the largest length of the respective paper sheet to be transported. Sheets are advanced in partly overlapped positions to abutment markings and along the feed table. The grippers receive the sheets at their foremost edges to bring about a scale-shaped formation. Patent 2,848,226 by Artur Buttner, Karl Barthel, and Ludwig Jung, assigned to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

PREVENTS INK PILING ON SILK SCREEN PRESS

In this silk screen press, a pile-up of ink is avoided by the use of an ink distributor which delivers a variable and preselectable quantity of ink to the squeegee at the beginning of each stroke. Patent 2,845,858 by Sidney W. Denley.

TWO COLOR OFFSET PRINTING PRESS

A feature of this multi-color press, which includes one blanket cylinder, two plate cylinders with respective inking sources, and an impression cylinder, is the fact that either plate cylinder can be removed from contact with the blanket cylinder to convert the press into a one-color apparatus. Patent 2,845,860 by Luis Mestre, assigned to Lewfor Development Corp.

Feeding, Folding, Delivery:

SAFETY DEVICE FOR AUTOMATIC PLATEN PRESS

A gripper guard is mounted on a shaft which extends fore and aft of the machine and is connected to a disengaging device for stopping a press. A handle is provided at the rear end of the shaft so that the guard may be actuated from the front or the back of the press. The disengaging device will not re-engage until the guard has returned to its original position. Patent 2,845,863 by Erich Schwarzbeck, assigned to Schnellpressenfabrik Aktiengesellschaft Heidelberg.

SHEET FEEDER

An air blast nozzle is used in combination with an oscillatory vacuum feed in this high speed paper feeder. Both are operated and valved in sequence by a cam drive. The device also has a stationary vacuum sucker which holds the lower papers of the stack in proper registration. Patent 2,849,232 by John Halahan, Theodore F. Aronson, and Floyd A. Lyon.

WEB TENSION CONTROL

Proper tension is so effectively maintained by varying the extent of a loop in a traveling web that fragile webs, such as foil, can be handled by this control. The length of the web between two positively driven rolls actuates an arm which varies the speed of a tensioning roll. Patent 2,847,210 by Angus M. Halley.

SHEET DETECTOR FOR PAPER GATHERING APPARATUS

Stacks of sheets to be gathered or collated are supported on suitable feed tables, where they are picked up by finger and suction devices and delivered into as-

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PATENT SEARCHES

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sembled stacks. Sheet detectors determine that only one sheet is being handled. Glue assemblies deposit a spot of adhesive to the trailing edge of each sheet, and press the sheet onto the ones below it to prevent shifting of the stack being assembled. Sheets of different sizes can be handled. Patent 2,846,214 by Carl W. Didde and Donald A. Glaser.

PRESS SHEET FEEDER

The novel features provided include suction pick-up fingers with an ejecting device in case two sheets are picked up at once, advantageous mechanism for guiding the sheets of the stack upward during movement of the stack and efficient means for separating the forward edge of the top sheet from the stack. Patent 2,846,220 by Luis Mestre, assigned to Lewfor Development Corp.

BUCKLE TYPE FOLDING MACHINE

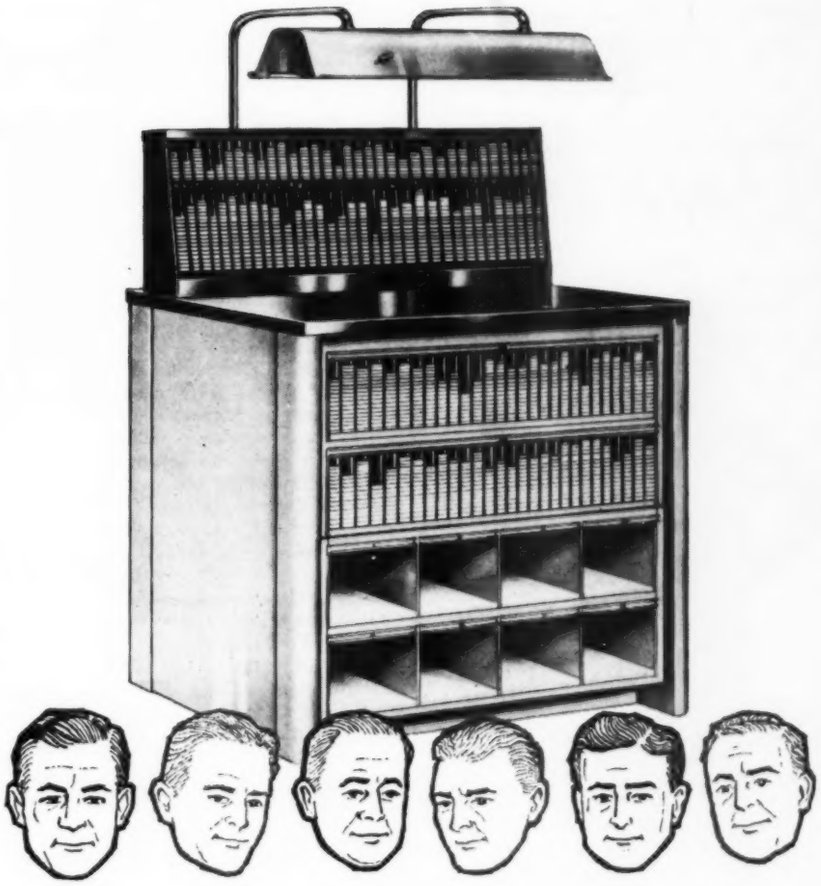
This machine can impart more than four parallel folds to a workpiece. This is accomplished by a novel arrangement of feeding and folding rolls, whereby each succeeding pair of rolls engaging the work pieces comprises a fixed mounted roll and a coacting resiliently mounted roll. As the workpiece is folded and becomes thicker, the rolls can separate to accommodate the extra thickness. Patent 2,847,209 by Edwin Olson, assigned to Russell Ernest Baum, Inc.

REVOLVING LAYBOY PILER

Sheet stacking arrangement for a layboy may be used with either the conventional or continuous type of layboy. It provides a dual-stack receiving arrangement, which is movable relative to a sheet feeder on the cutter to present either of two stack receivers in operative relation to the layboy to receive sheets from the sheet-feeding mechanism. The arrangement saves time in the exchange of skid bases in the layboy and saves space in the sheet handling line. Patent 2,849,236 by Delton C. Beaulieu, assigned to Kimberly-Clark Corporation.

EDGE FINISHING FOR DAMPENING ROLLER COVERS

Opposite side edges of a roller cover sheet for a lithographic press are sewn together, forming a longitudinal seam in the sleeve. The unbound end edges of the cover are provided with welt cords secured by stitching. A smooth surface without bulkiness at the edges is provided, and the seam and edge finish are strong enough to withstand stretching and disintegration. Patent 2,840,888 by Paul N. Guglielmo and Herbert Jacobs.



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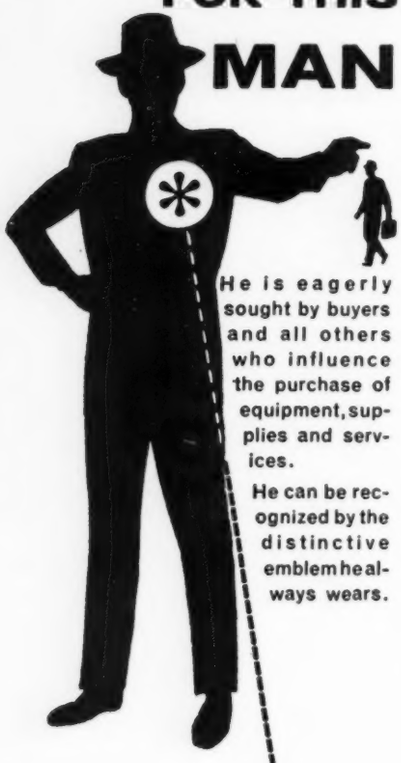

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books

Eastern Edition—Blue Book

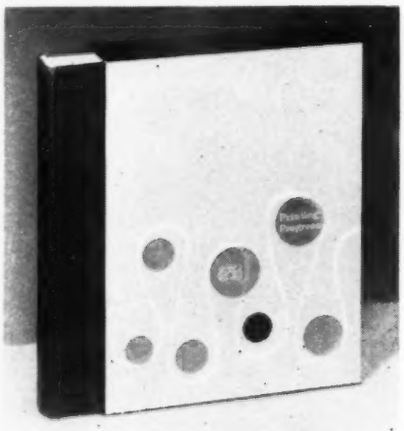
The 1958-1959 Eastern Edition of the *Printing Trades Blue Book*, carries the same type of information as previous editions. The publishers tell us, however, that this issue underwent the greatest revision of any in the past two decades. In it are listed printers, binders, typographers and suppliers to the printing industry. Covered are all of the East coast states from Maine through Florida, except for metropolitan New York and New Jersey which are covered in the New York edition.

General listings of operating plants are in geographical and alphabetical order. Shown are firm name, year established, address, city and state, phone number, names of officers or principals, name of buyer and lines of business.

Printing Trades Blue Book—Eastern edition. Hard bound, 790 pages; size 5½ in. by 8 in. Price, $20 per copy. Order direct from A. F. Lewis & Co. of New York, Inc., 147 Fourth Ave., New York 3, N. Y.

Printing Progress: A Mid-Century Report

Marking the 50th anniversary of the founding of the Craftsmen's movement in America, the Intl. Assoc. of Printing House Craftsmen is completing plans for publication of a beautiful 500 page limited edition book which it will title *Printing Progress: A Mid-Century Report.* Publication date is Sept. 1959.



More than 20 top book designers and typographic and art design experts will work on the project. A like number of editors and technical writers will contribute articles.

An idea of the range to be covered may be gained from the chapter headings: *An Amazing and Dramatic Story of Industry Progress, New Concept of Craftsmanship, Research in Graphic Arts; Influence of Printing on Humanity, Art Copy Preparation Techniques; Type Composition and Typographic Copy Preparation, Printing Plate Making, Printing Presses and Presswork, Paper For Printing, Printing Inks and Other Materials, Processing of Printed Sheets, Special Printing Applications, Office Reproduction Processes, Technology of Things To Come* and *Summary of Major Contributions.*

The book will be produced in several printing plants in this country and in Canada in 8½ in. by 11 in. size, hard bound with slipcase.

This is a limited edition book and it must be ordered in advance. Price is $3.75 a copy, cash with order. Order from A. E. Giegengack, Chairman, Finance Committee, IAPHC Anniversary Committee, 5728 Connecticut Ave. N.W., Washington 15, D. C.

General supervision of the entire book project has been accepted by Howard N. King, vice president, Maple Press, York, Pa.

Tells Unusual Story

One of the most attractive and absorbing printed pieces to come across our desk recently is the colorful brochure published by the Everett Waddey Co., Richmond, Va., in connection with the company's 75th anniversary. This 54 page slick paper plasticbound book tells the unique story of the company's services and the background of its operations.

The front cover of the brochure bears the red and white *EW* trademark and the single word, *Traditions*, with simple signature below. Within the pale green covers is the picture presentation of all departments including letterpress, offset, engraving, binding, supply, and specialized services. As brought out in the introduction, "it is possibly the only business in the world rendering so many services under one roof."

Through the different sections of the book there is a running story which logically brings in the many photographs of personnel and equipment in action. In the introductory and letterpress section, as an example, there is the consulting room, the art department, the various elements of the composing room, and the locking of forms. Then follows a discussion of offset leading up to today's modern methods and equipment, with pictures showing the old lithographic stones, today's zinc litho plates, the camera room, negative correction, photocomposing room, etc. Next in line is the section on presses, showing and discussing job presses, cylinder presses, offset presses, engraving presses, foil stamping machines, and imprinting machines. The third of the processes—that of copper engraving—is brought in in the same manner as letterpress and lithographic services, and the picture presentation shows how engraving design is cut into copper. The same general treatment is accorded equipment and methods employed in the binding department.

Equipment and Supplies

(Continued from Page 78)

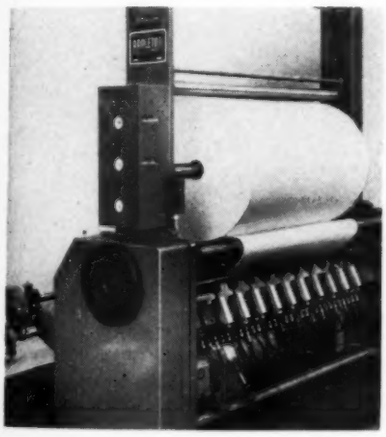
Air Conditioning Units With Interchangeable Sections

Central station air conditioning units are being made by Young Radiator Co. in interchangeable sections. Ten sizes, with a range of air volume capacity from 700

c.f.m. to 28,000 c.f.m. are available in vertical and horizontal types. Nine sizes, and a selection of 2 to 21 zones are offered in the multizone type. Ample access panels and doors are said to provide for easy inspection and service in the field. Circle No. 272 on Reader Service Card.

Scoring and Slitting Machine Cuts Stock Narrow as ¼ in.

Model SR-60 score and shear cut slitter can be used for slitting paper and paper board as narrow as ¼ in., reports Doven Division, Appleton Machine Co. Web sizes vary from 36 in. to 125 in. wide and standard model will take parent rolls up to 48 in. diam. The Doven shear cut principle said to enable an inexperienced



operator to reassemble cutter blades to 0.001 in. tolerance is incorporated into the machine. Air operated cutters which allow for simplified adjustment to insure equal pressure are another feature of the slitter. According to Doven, machine can be equipped with any type of electrical or mechanical drive. Circle No. 288 on Reader Service Card.

Gas Powered-Electric Drive Fork Lift Trucks Are Announced

The Automatic Transportation Co. has developed a new line of Dynamotive gas powered-electric driven fork lift trucks. The gas engine transmits its power

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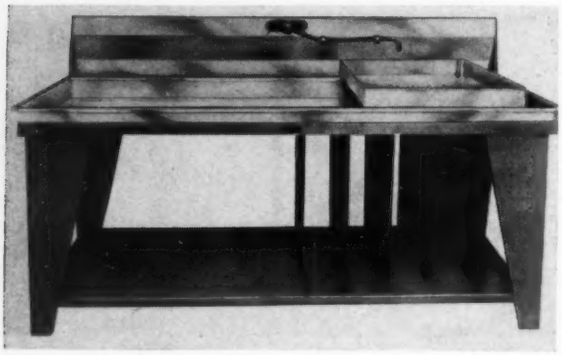
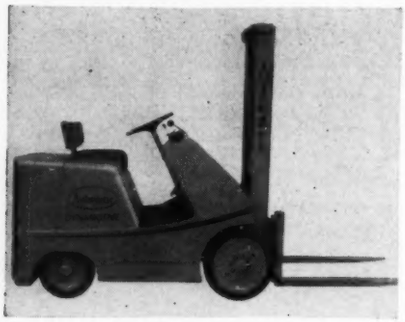


Developing Sink—Bar-Plate Manufacturing Co. recently announced its Imperial developing sink equipped with full length separate drain dumping compartment to dispose of waste solutions. Four trays may be accommodated. Sinks are available for film sizes 20 in. by 24 in., 26 in. by 30 in., and 30 in. by 40 in. Circle No. 290 on Reader Service Card.

through a specially designed variable voltage generator to a matched d.c. series wound electric drive motor, to form a synchronized power package. This type



of drive enables the gas engine to operate at its most efficient speed. Fuel savings as high as 30% are claimed.

Capacities of the new Dynamotives range from 4000 to 10,000 lbs. Travel speed is 8.5 m.p.h. Truck lifts 4000 lb. loads up to 75 f.p.m.

Maximum driver safety has been stressed in the design of the trucks. The hydraulic reservoir and gas tank are now located high in the front dash panel to give protection from possible damage. Circle No. 289 on Reader Service Card.

White Light Stroboscope With Built-in Synchronizing Generator

A white light stroboscope with built in synchronizing generator, known as Model 7N12, has been announced by Electro Products Div., Western Gear Corp. Pulsing rate which is variable from 8 pulses to 100 pulses per sec., providing 3 lumen sec. of light with a flash duration of 10 microseconds, can be obtained. Unit is equipped with a set of contacts for external synchronization. Printed forms, register, and ink flow can be directly observed in true color while press is in operation. Calibration can be man-

ually adjusted without using external contacts. White light enables viewing color or ink in true tone value. Light intensity can be approximately doubled if less than 30 p.p.s. are required. Stroboscope is a.c. powered. Circle No. 291 on Reader Service Card.

Powered Hoist Trolley Moves 2T. Loads With Positive Control

Gardner-Denver Company is manufacturing a powered hoist trolley for moving loads up to 2 T. with positive control. Powered by an axial piston type air motor, Hoistractor exerts 250 lb. drawbar pull on a beam through a spring loaded neoprene drive wheel. It can be used to pull a 2 T. load at 70 ft. per min. Speed

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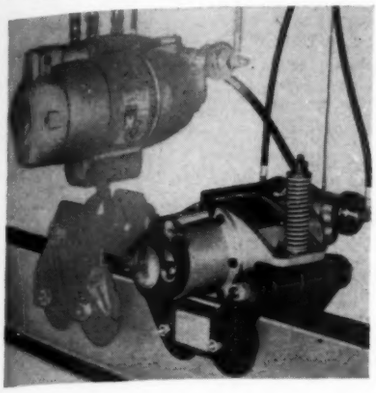
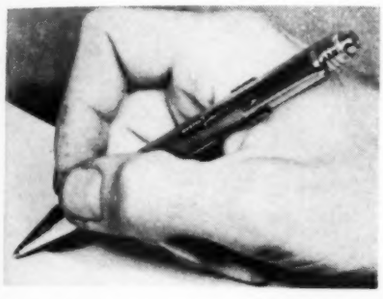
can be varied from a slow creep to full speed of 150 ft. per min. depending on load. Single one hand control for hoist and tractor is available in two types. One type is a pendant control, equipped with a squeeze hand grip with up and down



operating levers for the hoist and foreaft levers for Hoistractor. The second type control is a swiveled rod with four way grip control. Hoistractor will fit most standard size beams and can be adapted to operate on other types of track. Circle No. 292 on Reader Service Card.

Four Color Ball Point Pen Supplied With Retraction Mechanism

A four-color ball point pen equipped with a retraction mechanism for changing colors has been announced by Koh-I-



Noor. By pushing out the desired color the previous color in use is automatically retracted. Four colors include red, blue, green, and black. Circle No. 284 on Reader Service Card.

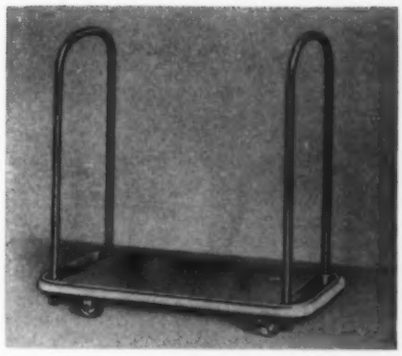
Walton Laboratories Humidifiers Supplied with Centrifugal Atomizers

Walton Laboratories, Inc. has announced a new line of humidifiers equipped with a centrifugal atomizer

said to produce fine water vapor without heat. Model SF-5, shown, embodies an accordion filter with 620 surface areas. Units are claimed to evaporate 1 gal. water per hr. Operates with water and electrical equipment. Circle No. 293 on Reader Service Card.

Colson Platform Truck Equipped with Removable Handles

A platform truck with removable handles which enable the truck to be converted for various handling needs has been introduced by Colson Corporation. To support bulky material, both handles are left in position and truck can be pushed or pulled. When both handles are utilized, platform size is 16 in. by 30 in. When one handle is removed,



truck becomes a push type and large packages can be carried. Both handles can be removed if truck is to be used for mov-

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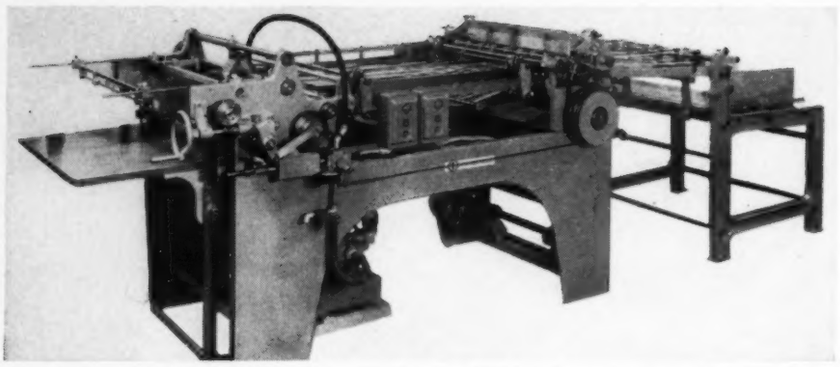


Combination Feeder Perforator Jogger—Nygren-Dahly Company recently introduced its completely automatic combination feeder perforator jogger unit which will handle 26 in. sheets. The air pile feeder, perforator and pump are built into one frame. To operate, stock is manually placed on feed board and start button is pushed. According to Nygren-Dahly, the machine will run at rated speeds up to 8000 sheets per hr. in straight away perforating, and at rated speeds up to 4800 sheets per hr. for precision strike-in work. Unit measures 3½ ft. wide by 10 ft. long. Circle No. 282 on Reader Service Card.

ing flat stacked material. With both handles in position, truck can also be converted into a receptacle for waste materials by slipping a canvas bag over the two end handles. Load capacity is 800 lbs. Circle No. 302 on Reader Card.

Linotype Introduces New Meteor Improved Version of the Model 5

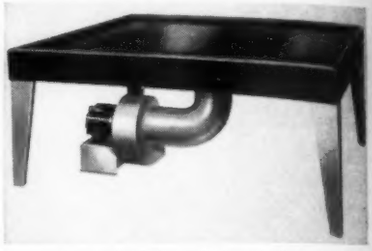
The original Model 5 Linotype, has been given so many new features that it has been given the new name of Meteor. Announcement was made recently by Mergenthaler Linotype Co.

With new speed up to 10 lines per min., the Meteor is designed for text matter composition in faces that run in 90 channel magazines. This includes most text faces through normal 18 and condensed 24 pt.

Features of the Meteor are as follows: (1) Snubber for distributor shifter for smoother transfer and to eliminate rebound. (2) New cam contours eliminate vibration and provide smoother high-speed operation. (3) Brake halts machine smoothly and positively without chatter or rebound. (4) Guide on second elevator bar permits lifting matrices in a vertical position to prevent damage to matrices. (5) Adjustable spaceband buffer permits adjustment of buffer's angular location for smooth spaceband assembly. (6) Improved mold turning mechanism provides smoother starting and stopping, easy acceleration and reduces impact at high speed. (7) Adjustable drag bar in intermediate channel, steadies spacebands during transfer from first elevator jaw. (8) Two sets of keyboard driving pulleys provide proper keyboard speeds for automatic and manual operation. Check off No. 251 on Reader Service Card.

Fibrabon Surfacing Process Said to Protect Deep-etch Tables

Douthitt Corporation has developed a coating for its downdraft deep-etch table that is said to enable long years of service under all platemaking conditions. This surfacing process, known as Fibrabon, is resistant to all acid and alkali, reports



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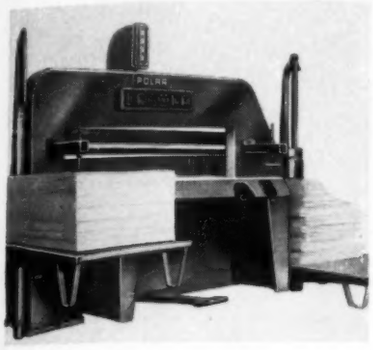
sponsor. It will not check, crack, sag or peel. Normal abrasive action of plates will not wear away coating assuring a trouble free surface that permits continuous production of deep-etch plates without down time. Circle No. 303.

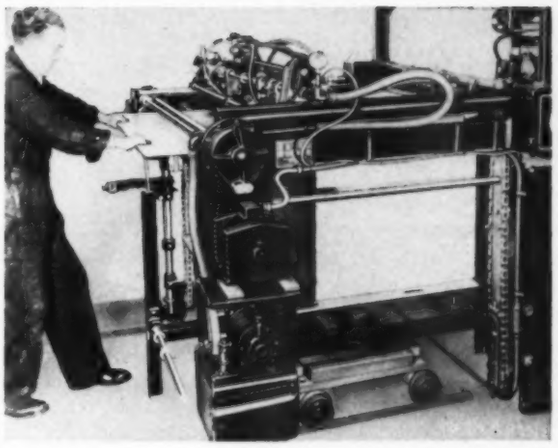
57 in. Polar Paper Cutter Equipped with Automatic Spacer

Gane Brothers & Co., Inc. has announced a new 57 in. Polar paper cutter. Feature of the cutter is the Electromat auto-spacer with a slow-down action which arrests forward motion of back gauge at a point 1¼ in. from cutting



position and then eases stock to the preset position. Other features are a three section back gauge, two-hand pushbutton control, and 6 in. clamp opening. Circle No. 294 on Reader Service Card.

Boxboard Press — Boxboard container sheets may be printed rapidly by the Mann offset boxboard press, specifically designed for container work, reports American Type Founders Co., Inc. The two color press is supplied with a maximum board size of 30½ in. by 43½ in., said to make machine a complement for the Bobst Autoplaten and other die cutting and cold waxing equipment which takes a 30 in. by 42 in. board. Press is equipped with special heavy duty preloader, continuous feeder, and continuous delivery. It can handle board stock up to 0.032 in. thick. On presses used exclusively for card stock from 0.020 in. to 0.032 in., forwarding cams and tape roller speed is increased for maximum efficiency. It is claimed first class halftone reproduction, even on four color work which goes through press twice, may be had up to 133 line screen. Circle No. 295 on Reader Service Card.

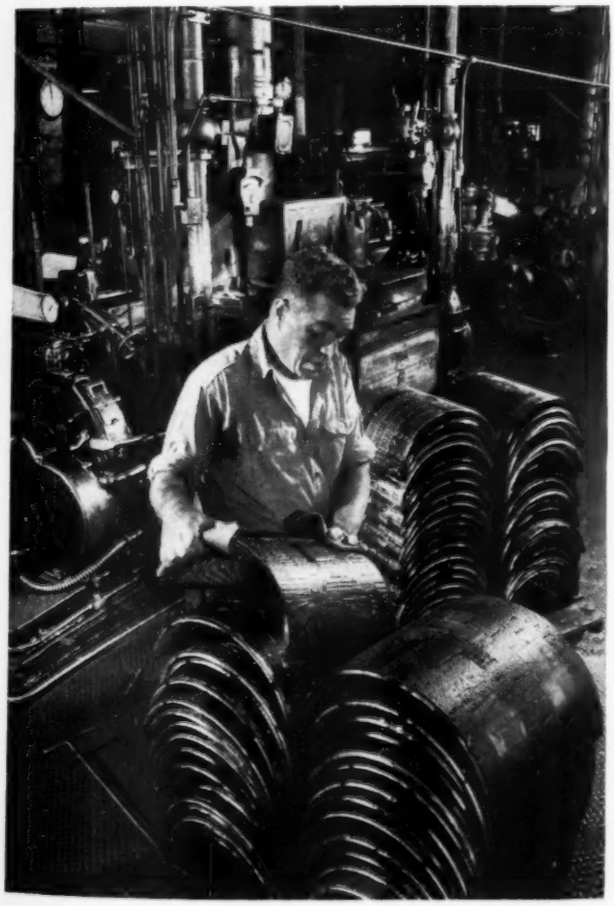


3M Offset Plate Development Kit Includes Sponge Pads and Holder

An offset plate developing kit consisting of three developing pads and a holder has been reported by Minnesota Mining and Mfg. Co. The sponge pads are approx. ¼ in. thick by 6 sq. in. The holder is composed of a base plate and a locking handle which attaches the sponge to the plate. It is said the new sponging method permits more uniform pressure over a larger plate area. Circle No. 280 on Reader Service Card.

Photoengravers' Acid Pump For Loading and Draining Tanks

The Model 610 Randolph pump is designed for loading and draining the tanks of all types of photoengravers' etching equipment. Fluids handled are ferric



Increase casting speed, quality with

KEMP STEREO AND REMELT POTS

In today's highly mechanized operations, no other units can offer you all the advantages of Kemp Stereo and Remelt Pots. Kemp units heat the metal from *inside* the pot . . . give even temperature for quality . . . fast recovery rates for speed and capacity. Dross formation is cut drastically, utility costs slashed to a minimum.

Larger plants may require one or more Kemp Obround Stereo Pots, with casting rates up to 340 plates per hour. For more limited uses, the Kemp Model 36 CTF Metal Pot, a completely pre-assembled pot, is extremely popular. You merely set the unit in place, connect utilities, and put it into operation.

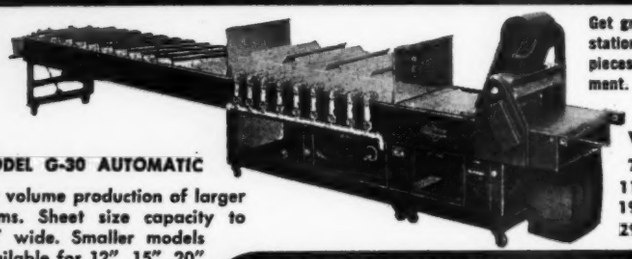
Your Kemp Representative will give you complete information on Kemp gas or electric fired Stereo and Remelt Pots. Or write direct for Bulletin IE-10. The C. M. Kemp Mfg. Co., 405 E. Oliver St., Baltimore 2, Md.

KEMP OF BALTIMORE

Kemp CTF Metal Pot

For More Information Circle 198 on Reader Service Card

RAISED PRINTING IS HIGHLY PROFITABLE BUSINESS



MODEL G-30 AUTOMATIC

For volume production of larger forms. Sheet size capacity to 30" wide. Smaller models available for 12", 15", 20" sheet widths.

Get greater returns from your present printing presses. Social and business stationery, advertising folders, box wraps, greeting cards and other decorative pieces have "eye-appeal" when produced with Virkotype raised printing equipment.

WRITE FOR INFORMATION AND SAMPLES

VIRKOTYPE COMPOUNDS AND INKS
7 VIVID VIRK-OPAQUES
11 METALLICS
19 RICH COLORS
29 BRILLIANT SPARKLES

VIRKOTYPE CORPORATION

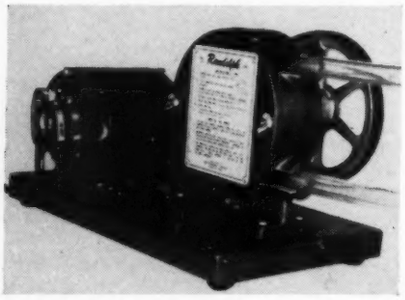
Virkotype Sales Corporation
608 SO. DEARBORN ST. CHICAGO 5, ILLINOIS

Main Office and Plant
111 ROCK AVENUE PLAINFIELD, N. J.

THE WORLD'S LARGEST MANUFACTURER OF MACHINES, COMPOUNDS AND INKS FOR RAISED PRINTING

For More Information Circle 236 on Reader Service Card

chloride and nitric acid. Intake and outlet consist of one continuous flexible tube through the pump body. Pumping action is generated by the squeegee action of a double rotor. The pump's design eliminates all contact between the fluid being pumped and the moving parts. Tube size

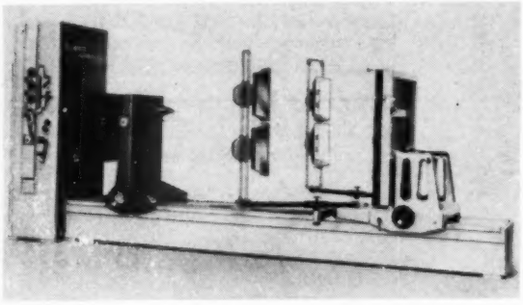


is ¾ in. o.d. by ½ in. i.d. Pump is powered by 1/12 h.p. motor. Capacity is 4.1 gal. per min. Overall dimensions are 8 in. by 15 in. by 8¾ in. high. Circle No. 296 on Reader Service Card.

Powerflo Pump Transfers Liquids From Original Shipping Containers

Graco Company, Inc. has introduced its Powerflo pump designed for pumping inks, solvents, adhesives and other liquids and semi-fluids from original shipping containers. Pump enables equal delivery on both up and down strokes for

(*Continued on Page* 92)



Klimsch Roll Film Camera — Repro Graphic Machines, Inc. has introduced the new Klimsch Expressa, a roll film camera with magazines for three widths of film and four screens. Camera is equipped with brass focusing bars and grippers for quick setting, and automatic diaphragm control for fast operation. Circle No. 298 on Reader Service Card.

Clamp for Fork Trucks—A Bartel paper roll clamp attachment has been designed for Clarklift fork trucks, manufactured by Industrial Truck Div., Clark Equipment Co. Designed for rapid handling and vertical stacking of heavy rolls of newsprint, kraft paper or corrugated box stock, attachment is used to transport rolls up to 45 in. diam. It is interchangeable among Clarklift models of 3000 lbs. through 5000 lbs. capacity. Attachment is available in single roll model or double roll model and will handle weights up to 3800 lbs. on lighter trucks and up to 6000 lbs. on trucks with greater weight capacity. It can also be used to accommodate roll cores as small as 3 in. diam. Clamping force of 9000 lbs. is exerted by hydraulic cylinder. Pad and clamping arm are designed to pivot 24 deg. to either side allowing device to self center on rolls for fast handling. Circle No. 300 on Reader Service Card.

STOP STATIC ELECTRICITY

PUSH BUTTON & SPRAY

STATIKIL

Guaranteed...
USED REGULARLY IN THE LARGEST PLANTS
THE ORIGINAL • THE ONLY

Trade Mark
Reg. in U.S. Pat. Off.

$3 A CAN • $30 A DOZEN

Just Spray STATIKIL

1220 WEST 6th ST.
CLEVELAND 13, OHIO

Quality Control Equipment for the Printing Industry for 42 years

For More Information Circle 53 on Reader Service Card

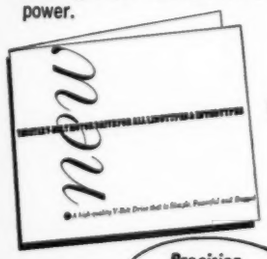
SAFE, SIMPLE, EFFICIENT

THE NEW STAR V-BELT MOTOR DRIVE

The Star V-Belt Motor Drive is located under the back step of the machine, where it is safely out of the operator's way. There is no danger of his foot touching a moving pulley. Because the drive is positioned at the rear of the machine, it is immediately accessible for routine inspection and servicing.

CHECK THESE OTHER OUTSTANDING FEATURES

- A variable speed pulley is standard equipment and can be locked at any desired speed.
- The same endless V-Belts are used for all speeds. Motor safely positioned out of the way under the back step. No projections.
- By giving more V-Belt surface contact a sealed ball bearing idler pulley provides greater transmission power.
- Oil impregnated bearings requiring practically no lubrication used in the intermediate pulleys.
- Silent, vibration-free operation is assured by a special adjustable leg. This leg also supports the motor, prolonging both belt and motor life.
- A premium-type 110-220 volt motor with capacitor is standard equipment. It can be quickly and economically replaced when necessary.



- The Star V-Belt Drive fits all Linotypes and Intertypes, regardless of model or age. For more complete information write for our new brochure.

Precision TRADE ★ MARK Parts

STAR PARTS, Inc.
SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO.
AGENCIES: CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER • SO. ACTON, MASS.
CANADA: PRINTING MATERIAL LTD. AND AGENTS OVERSEAS

For More Information Circle 168 on Reader Service Card

At the price of

Pennies from Heaven

You'll be hip-deep in

TYPE FACES!

PROtype

• Saves time, special setting, hand lettering • More versatile than type itself! • Low initial cost • pays for itself! •

MERGENTHALER LINOTYPE COMPANY
29 Ryerson St., Brooklyn 5, N. Y.

Please send folder on low cost ProType.

Name_____

Company_____

Address_____

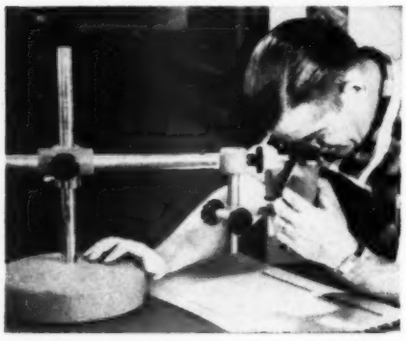
City_____ Zone_____ State_____

For More Information Circle 193 on Reader Service Card

continuous flow with no pressure on the drum. Delivery is controlled by opening or closing valve at hose outlet. It is said lower assembly can be removed without tools from power head for cleaning. Air operated power head is claimed to eliminate danger of sparking or high cost wiring. Pump is stainless steel. Circle No. 297 on Reader Service Card.

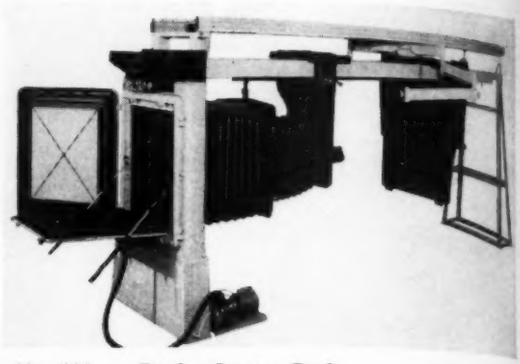
Stereo Microscope Furnished With Long Range Extension Arm

Edmund Scientific Co. has developed a stereo microscope on heavy weight base with long range extension arm. Base enables microscope to be rotated, moved up or down, or rotated on its axis. Total



horizontal travel is 360 deg. in a circle. 11 in. toward and away from support post. Vertical travel is 14 in. Microscope is equipped with two sets of objectives. Standard pair of wide field 10X Kellner eyepieces are used to provide 23 power and 40 power. Image is correct as to right and left. Circle No. 299 on Reader Service Card.

Robertson Overhead Camera—A new series of 830 general purpose overhead low bed cameras has been announced by Robertson Photo-mechanix, Inc. The vacuum film holder accommodates film from 4 in. by 5 in. to 26 in. by 32 in. Copy up to 34 in. by 44 in. can be used in the spring loaded, glass covered copyboard. Features include all-cast metal copyboard, front case and rear case structures; bi-rail track and center guide construction. Circle No. 281 on Reader Service Card.



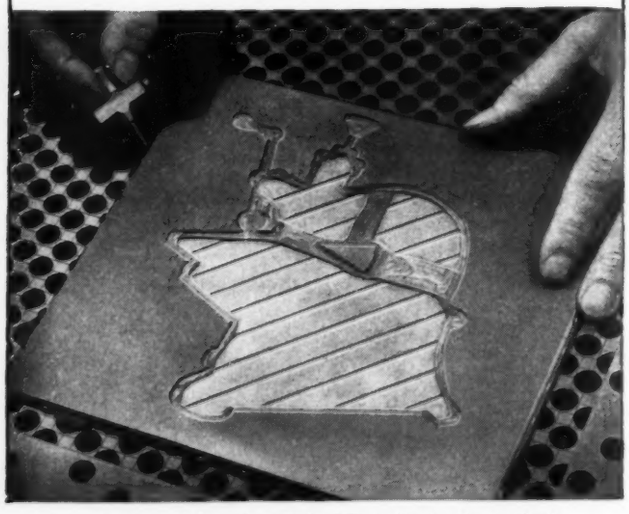
Parallel Liner Instrument For Drawing Equidistant Lines

Eldorado Products Co., Inc. has announced its parallel liner instrument for drawing parallel and equidistant lines. Spacings between lines are obtained automatically by setting an indicator to any of 11 desired distances marked on an indicator disk. Angles from 0 deg. to 45 deg. can also be used. Advancement of the lines is made by pressing a push button on the gear box. Circle No. 301 on Reader Service Card.

PMC STERLING TOGGLE BASE

Precision ground to give an accuracy unequalled by other methods of machining PMC Sterling Toggle Base in magnesium or semi-steel simplifies lock-up—saves time—increases profits.

THE PRINTING MACHINERY CO.
436 Commercial Square
Cincinnati 2, Ohio



For More Information Circle 147 on Reader Service Card

ENGINEERING FOR THE GRAPHIC ARTS

TO MEET GROWTH REQUIREMENTS

- ANALYSIS OF PRESENT OPERATIONS
- REPORTS AND RECOMMENDATIONS
- PLANS AND SPECIFICATIONS
  - plant rearrangement
  - plant extension
  - new plant
- CONSTRUCTION MANAGEMENT

CHAS. T. MAIN, INC.

BOSTON, MASSACHUSETTS • CHARLOTTE, NORTH CAROLINA

For More Information Circle 110 on Reader Service Card

Helpful Literature

(Continued from Page 22)

VULCAN PRESS BLANKETS

A blanket selector for offset press blankets has been released by Vulcan Rubber Products Div., Reeves Brothers, Inc. Vulcan has recently added a new line of Durofyne blankets to its four lines of Duroflex blankets. Circle No. 323 on Reader Service Card.

HANTSCHO WEB ROTARY PRESS

Case history and a sample run of a monthly supplement to *Billboard* magazine are offered by George Hantscho Co. Inc. Unit used was a Hantscho web offset four-unit perfecting press running a combination of three and four color pages. Circle No. 307 on Reader Service Card.

LUBRICATING PRODUCTS

Service Bulletin No. 10 is being offered by Adam Cook's Sons, Inc., maker of Albany lubricants for presses and other graphic arts equipment. Circle No. 320 on Reader Service Card.

ROTARY NUMBERING HEADS

Wm. A. Force & Co., Inc. has published a Force Rotary Heads and Typographs booklet to describe its rotary numbering heads for checks and sales books. Circle No. 322 on Reader Service Card.

MARKEM SPECIALTY INKS

Markem Machine Co.'s specialty inks for dry offset, screen process, rotary press, leaf embossing and other standard and special processes are discussed in a six page folder. Circle No. 341 on Reader Service Card.

Bindery

DUAL STREAM COLLATOR

Didde-Glaser, Incorporated, has prepared a bulletin and 11 min., 16 mm. color, sound film on its Speed Klect dual stream collator. Maximum stock size is 9 in. by 12 in. on this unit. Circle No. 312 on Reader Service Card.

TAPE CONTROLLED PAPER CUTTER

The Regent Magnetic Tape Spacer Cutter is described in literature offered by the Lawson Company, Div. Miehle-Goss-Dexter, Inc. Cutting signals on magnetic tape control the back gauge as it moves the lift of paper through a series of cuts, according to sponsor. Accuracy is said to be controlled to 0.004 in. Circle No. 339 on Reader Service Card.

SWING HINGE BINDER

Royal McBee Corp. has issued a four page folder on its S-569R swing hinge binder. Designed for holding records which must be added to or removed frequently, a swing of the hinges unlocks the binder prongs. Available in sizes up to 14 in. by 14 in.; capacities are 1½ in., 2 in. and 3 in. Circle No. 348 on Reader Service Card.

NYGREN-DAHLY LITERATURE

Information is available from Nygren-Dahly Company regarding its 26 in. combination feeder perforator jogger. Unit is reported to be completely automatic and is claimed to handle 8000 sheets per hr. Circle No. 350 on Reader Service Card.

Miscellaneous

ABRASIVE FLOOR PLATE

A. W. Albrip abrasive rolled steel floor plate is described in literature available from the Alan Wood Steel Co. Algrip is said to be made by rolling grinding wheel type abrasive into steel floor plates. Circle No. 328 on Reader Service Card.

ASCORLUX LIGHTING

An illustrated data sheet on Ascorlux lighting system, said to produce daylight color balance with high intensity for platemaking, is being offered by American Speedlight Corp. Circle No. 329 on Reader Service Card.

CONVEYOR SYSTEMS

A bulletin on engineered materials handling systems for paper and printing firms has been issued by Gifford-Wood Company, manufacturer of conveyors, electric and pneumatic drops and lifts. Circle No. 319 on Reader Service Card.

BAHNSON UNIT HUMIDIFIERS

The Bahnson unit humidifiers in various sizes and types are described in a booklet regarding humidification in the printing industry, offered by the Bahnson Company. Circle No. 317 on Reader Service Card.

MAXWELL BOND PAPER

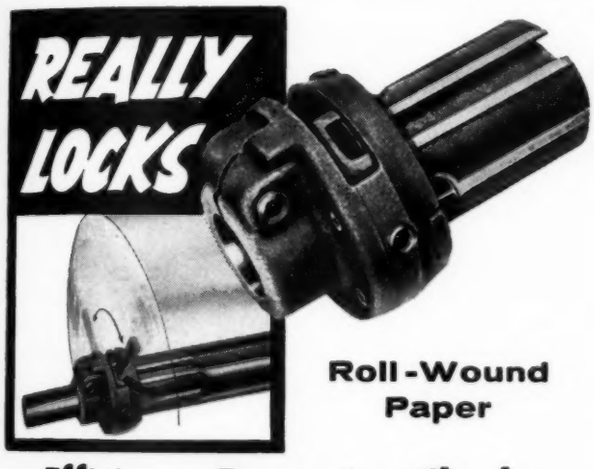
Maxwell Paper Co., Div. Howard Paper Mills Inc., offers samples of Maxwell Bond in six colors, four weights and six finishes. Circle No. 313 on Reader Service Card.

PENCO STEEL CABINETS

The Penco line of steel storage cabinets is described in a four page bulletin available from the Penco Division, Alan Wood Steel Co. Eight cabinet styles are mentioned and illustrated. Circle No. 337 on Reader Service Card.

BUNDLE TYING MACHINE

Gerrard Steel Strapping Dept., U. S. Steel Supply Div., U. S. Steel Corp., has issued a folder on the Model 12 Automatic Strapping Machine and a 36-page *Gerrard Blue Book of Packaging*. Case history is cited where two men and one machine tied 850 to 1000 newspaper bundles a day. Circle No. 310 on Reader Service Card.



Roll-Wound Paper

Efficiency Expansion Chucks

In one operation, lever the cam and lock it. It won't slip —ever. Unwind, rewind, or brake easily. There are efficiency expansion chucks for either fibre or steel cores up to ten inches in diameter—for shafts of 1" to 3½" in diameter in graduations of 1/16".

Chucks are inter-changeable—no rights or lefts. Give years of service—made of malleable high strength castings. Surfaces which contact core are precision machined. Lever action applies powerful force to the expansion jaws. Ribbed jaws bite firmly into core, eliminating core slippage when starting or changing speeds, even under extreme brake tension.

Write for the full time and money saving facts to—

VALLEY MFG. CO. Valley, Nebraska

For More Information Circle 197 on Reader Service Card

Make advertisers ADMIRE their own handiwork

No thrill in the world like the first eye full of a good job that you, yourself, had a hand in creating.

By cultivating high production standards, a paper can bring this daily thrill to those most important to its prosperity. Certified Mats often prove a big help.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

CERTIFIED DRY MAT CORPORATION, 555 Fifth Avenue, Dept. M, New York 17, N. Y.

For More Information Circle 36 on Reader Service Card

Border Magic
WITH THE
ROLL-A-FACE
ATTACHMENT FOR THE ELROD

Now, for the first time, with the Exclusive ROLL-A-FACE Attachment, it is possible to obtain many tooled designs in Elrod Borders.

● Eliminates most all border block and slide recasting ● Obtain full length borders and rules ● Eliminates ribs, short piecing and border breaks ● Easily attached, no holes to drill or tap ● Anyone can use efficiently ● Produces a hundred or more designs with only a few molds ● Moderately priced.

Ask about Speedangle Printers Angle Gauge too. Makes angled composition ordinary composition.

WRITE TODAY FOR FULL DETAILS

V. C. SHIDLER PRODUCTS
720 MILFORD STREET GLENDALE 3, CALIFORNIA

For More Information Circle 245 on Reader Service Card

Mechanism of the Linotype and Intertype

Written for Machinist-Operators, Machinists, Superintendents and Students

Technical operating knowledge of the Linotype and Intertype is available in the 14th edition of this 334 page book. Revised and amplified by Oscar R. Abel and Windsor A. Straw, the text includes 200 illustrations. Information has been added about late improvements in the machines. A practical and essential book for every composing room.

$5.50 per copy (Cash with order.)
Postpaid in U.S.A. only

PRINTING PRODUCTION
1276 W. 3rd St., Cleveland 13, O.

Self-Advertising Awards

(Continued from Page 35)

Honorable mention: Arcade Advertising & Litho Corp., Chattanooga, Tenn.; Equity Press, Inc., New York; Hansen - Scudder, Printers, Stockton, Calif.; Kraft Printing Co., Philadelphia; North Hollywood Printing & Stationery Co., Burbank, Calif.; Printing, Inc., Wichita, Kan.; and Young & Klein, Inc., Cincinnati.

Plants of 20 to 99 employees — First, William J. Keller, Inc., Buffalo, N. Y. Honorable mention: Baughman Co., Richmond, Va.; Litho-Krome Co., Columbus, Ga.; Masta Displays, Inc., New York; W. T. Peck Co., Philadelphia; M. H. Lavore Co., New York.

Plants of 100 or more employees— First, R. R. Donnelley & Sons Co., Chicago. Honorable mention: Griffin Press, Ltd., Toronto, Can.; Herald Press, Inc., Charlotte, N. C.; Publishers Printing-Rogers Kellogg Corp., Long Island City, N. Y.; E. F. Schmidt Co., Milwaukee.

Platemaker Must Know

Your platemaker needs to know what kind of stock the job is to be run on so that camera operation can be adjusted for best results. Exposure time and dot structure will vary according to surface of paper desired, says the Lithographic Div., New York Employing Printers Assoc., Inc.

Need for ROP Color

(Continued from Page 41)

ments on problems experienced with register marks, progressive proofs, ink standards and the like. In this way facts could be assembled.

Albert Lewis, of McCann-Erickson, New York, N. Y. said: "Checking proofs, mats, plates, etc., is a co-responsibility of newspaper and agency. We feel primary responsibility rests with the newspaper. Unless we hear from the newspaper, the plans of both of us may go sour. By letting us know what is wrong we'll be given a chance to correct mistakes."

Panel Member Winow commented: "Engravers tell us it is not always possible for them to get actual newsprint proofs. We would like to see a central newsprint source set up to provide engravers with the right kind of paper."

Continuing, he said: "I hope newspapers will find a way to solve the partial page problem. The average color advertiser is best served by smaller than page advertising."

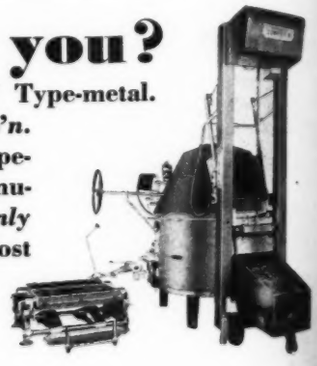
Richard E. Lewis, ANPA Mechanical Dept. Mgr., said all of the major ink companies can supply the ink colors and formulas. The testing service for ink is functioning and has now made sufficient tests to assure uniform quality from coast to coast. A list of brand name colors containing 120 formulas has been issued. A recent check shows that 451 newspapers are using ANPA inks. This is a growth of 80 newspapers over last year.

"The ideal procedure," Lewis said, "would be for agencies to submit proofs to us so we could pre-

Does this mean anything to you?

Only One* series of Type-metal Remelters is made by a manufacturer of Type-metal. *And that's the BIG CHIEF series, made by the United American Metals Corp'n.

¶ It stands to reason that equipment for the Care and Treatment of Type-metal is more dependable when made by a concern experienced in the manufacture of Type-metal, than one that knows Type-metal and its needs, *only by hearsay*. ¶ For Positive Proof of the Big Chief's Preference by the most Prominent Printers and Publishers, Unroll the Scroll (sent on request).



UNITED AMERICAN METALS CORP'N.
2246 W. HUBBARD ST., CHICAGO 12, ILL.
1000 WOODWARD AVE., CHARLOTTE 6, N.C.
2248 E. 25TH ST., LOS ANGELES 58, CAL.

All in the interest of furthering the Quality and Prestige of PRINTING to which both you and we owe our living.

For More Information Circle 178 on Reader Service Card

pare the proper formula to be distributed with orders going to newspapers. A number of agencies do this. We invite all agencies to do this prior to sending their orders to newspapers. It can be handled in 14 hrs., but we prefer at least two days time."

The ink blending system works for papers of all circulations, said Joseph Carroll of Sinclair & Carroll Co., Inc. He also said it was an economical method.

"Newspaper salesmen," declared Chairman Eybers, "need education in ROP color as well as advertisers and their agencies. Joseph Lynch, promotion manager, Washington (D. C.) *Post* and *Times-Herald,* discussed the clinics held and the ads prepared to teach the public and their own staff regarding daily newspaper color.

The perennial problem of missing or improper register marks in material received by newspapers for color reproduction again was considered. Specifically, the question was related to register marks on spot color material.

Panelist McMullen said registration adds considerably to spot color. Advertising gets best attention only if in proper registration.

Chairman Eybers observed that fully one-third of the material received by his papers comes in without register marks.

Panelist Stolz commented: "We rarely see the plates we buy. Nor do we see and check all the proofs. Responsibility belongs to the engravers and electrotypers. We send out thousands of mats and plates. Obviously, we can't check every one of them."

One of the prepared questions presented for answer was related to shipping color printing material in the form of stereo mats wrapped in moisture proof packages. The questioner wanted an explanation regarding what happens to these mats and what is occurring on close register jobs.

Panelist De Peugh said: "In Florida we have 80% humidity. Most mats lie in the postoffice before delivery and there are often other delays before they reach the stereotype department. Shrinkage occurs, making proper register impossible. Problems could be solved by wrapping cellophane around the mats."

Another question was: In adapting a magazine (conversion) color ad to daily newspaper color, what steps should be taken in preparation?

Panelist Westerman replied: "The main thing is the 75 line halftone screen. If, however, the artwork is clean and crisp and is in watercolor or casein, it should

California Firm Acquires Heidelberg — Imperial Press, Inc., Long Beach, Calif., recently installed a new 15 in. by 20½ in. Original Heidelberg cylinder press. Pictured are, left to right, Alvin K. Maddy, executive secretary of the Long Beach Harbor Dept., and George Rice, co-owner, Imperial Press, inspecting a job produced on the press for the Harbor Department.

SPEED PRODUCTION WITH RICHARDS'

SAWS • ROUTERS • MORTISERS

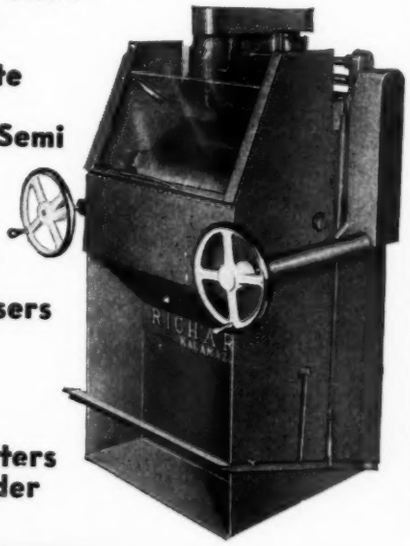
Stereotype Saws Three Sizes

Curved Plate Routers Tubular or Semi

Flat Plate Routers Three Sizes

Plate Mortisers Bench or Pedestal Models

Special Routers Built To Order



J. A. RICHARDS COMPANY

903 N. PITCHER STREET • KALAMAZOO, MICHIGAN

For More Information Circle 150 on Reader Service Card

BEVERIDGE MATS CLICK WITH OLD-TIMERS, TOO!

● An old-timer in the stereotype field is an honored mechanical executive with years of practical experience. That's why old-timers rely on Beveridge Mats. They know from years of experience that they can rely on Beveridge quality mats and unexcelled service. Old-timers and *new-timers* alike find these mats provide clean release of plate, deep molding qualities and sharp faithful reproductions. Can we talk?

New Products Division of

THE BEVERIDGE PAPER COMPANY

705 W. Washington Street

Indianapolis 4, Indiana

For More Information Circle 20 on Reader Service Card

WEB DRYING
LETTERPRESS • OFFSET
GRAVURE • FLEXOGRAPHIC
HIGH SPEED PRODUCTION
ECONOMICAL OPERATION
25 Years DRYER Experience
B. OFFEN & CO.
29 East Madison St. Chicago, Ill.

For More Information Circle 141 on Reader Service Card

TROLLEY'S THE THING!
●Wrap-ups due to web breaks in long folder and color leads are hard to prevent, that is, if you don't have COOKSEY SYSTEM TROLLEYS.
Investigate the Cooksey System Today
KORTHE ENGINEERING CO.
9353 Seymour Ave. Schiller Park, Illinois
Sales Agents { The Goss Printing Press Co., Chicago / R. Hoe & Co., New York / Wood Newspaper Machinery Co., New York

For More Information Circle 99 on Reader Service Card

come up all right on newsprint. Westerman continued, in response to what type of artwork reproduces best for daily newspaper color. He said: "Opaque watercolors or transparent colors are best. Carbro prints and washout reliefs can be used with proper handling."

Panelist Lewis commented that Bulletin No. 8 issued by the ANPA-AAAA dealt with the subject.

As a further expression of confidence in the use of ANPA-AAAA color inks, McMullen commented that papers using these inks should get excellent results. This was in reply to a query as to what consistency from paper to paper could be obtained on spot color in which a matched color is used.

Answering the question: Why do some papers ask for more than one set of mats?, Chairman Eybers said: "We ask for the extra set for protection in case we break or burn a mat."

Panelist Burke answered the question: What is the best screen to use for ROP color? Burke said: "We recommend 65 for the main reason that some artwork does not come up well with 75. The 65 will go anywhere. It is safer to stick with it unless you have excellent art."

Spitaleri also commented: "If the copy is good enough, the 75 line screen is all right. Any newspaper that can't print a 65 line screen doesn't deserve to be on a national schedule."

Hot and Cold Molding

The difference between hot and cold molding, in response to a question, was explained by Panelists Lytle and McMullen. In hot molding, temperatures as high as 350

Photomechanics and Printing
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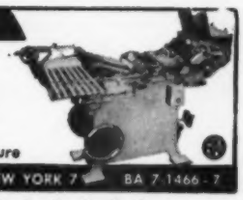

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M-G-D Managers Meet — Eastern District Managers for Miehle Company, Dexter Company and Lawson Company met recently in New York, N. Y. to plan and coordinate a sales and service program within the framework of Miehle-Goss-Dexter, Inc. Pictured are, left to right, Lester M. Reiss, Lawson Company, Norman T. Steed, Miehle Company, and M. S. Burroughs, Dexter Company.

to 375 deg. F., are involved. In cold molding the temperature range is from 0 to 150 deg. F., according to conditions. Thermoplastic plates used for dealer cuts cannot be hot molded because they cannot stand temperatures higher than 120 deg. F.

Regarding highlighted mats, Panelist Winow inquired about the new glass mats that don't require highlighting and which maintain high and middletone values. Chairman Eybers responded by saying that highlighting is done by some newspapers. Generally, however, newspapers do not have the time, nor are they equipped to highlight mats. Highlighted mats are needed and mechanical executives generally are agreed that it should be done by the mat manufacturers.

Panelist Lytle commented: "We used to send out two sets of mats—one Bista treated (highlighted) the other not treated. Now both sets are Bista treated."

Mech. Supt. William Dorris, Des Moines (Ia.) *Register* and *Tribune*, said: "We have used both Bista and glass mats and also have used our own makeready. We like to have it built in. Bista or glass mats are equally satisfactory."

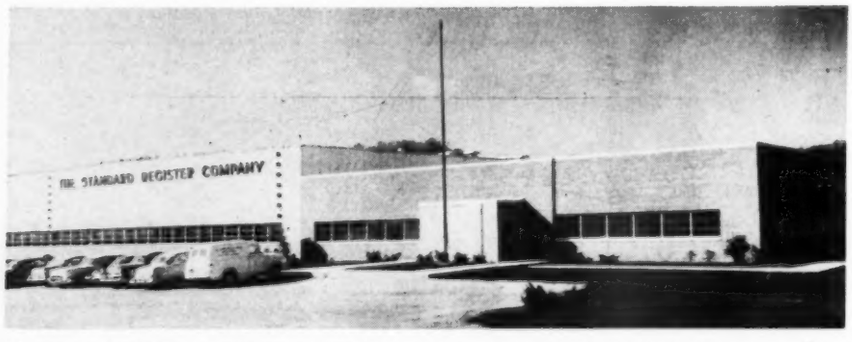
Speed in Mailroom

(Continued from Page 49)

dropped down a chute where it is carried to the proper truck or railroad boxcar. Here the sacks are stacked and made ready for travel.

It is possible, say Meredith spokesmen, for a magazine to leave machine bindery, go through the entire mailing process, and be on a truck or boxcar ready for delivery in less than four minutes. This accounts for the production feat of 320,000 magazines mailed per day.

Directing Meredith's mailing operations are: Supervisor Walt Mitchell, a mailroom member for over 38 years; Harold Hupton, first shift foreman, a 31 year member; Don Prince, first shift foreman, a 21 year member; and Dale Nuzum, third shift foreman, a 20 year employee. Corwin Dawson, who oversees subbasement shipping, has 32 years' experience with the company. This group provides 142 years of experience in guiding the production of this vital department.



New Standard Register Plant—Standard Register Co. recently dedicated its new plant at Fayetteville, Ark., according to M. A. Spayd, president. Among the distinguished guests present were Arkansas' Governor, Orval E. Faubus and Senator J. W. Fulbright. Located on 38 A. of ground on Route 71, the one story building is of contemporary design with 95,800 sq. ft. of floor space. It is constructed of ribbed aluminum, brick and glass.

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NOVEMBER 1958

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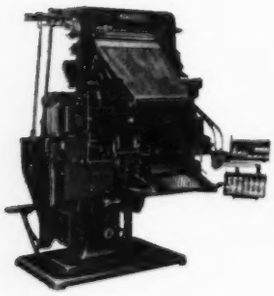

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